university magazine december 2003

Concordia

special issue

Concordia's New Face of Science

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Pablo Misas, BFA 01

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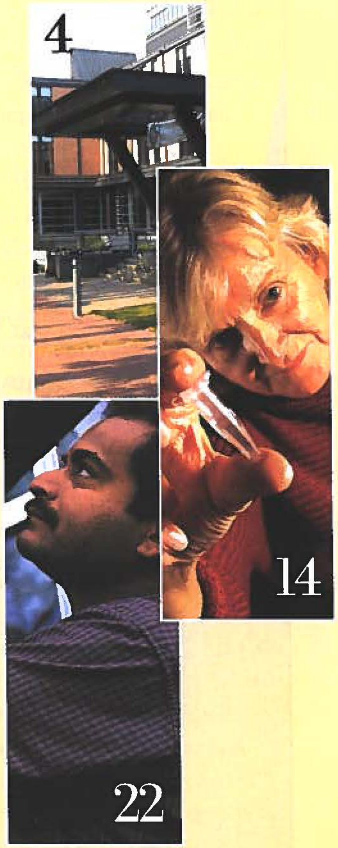

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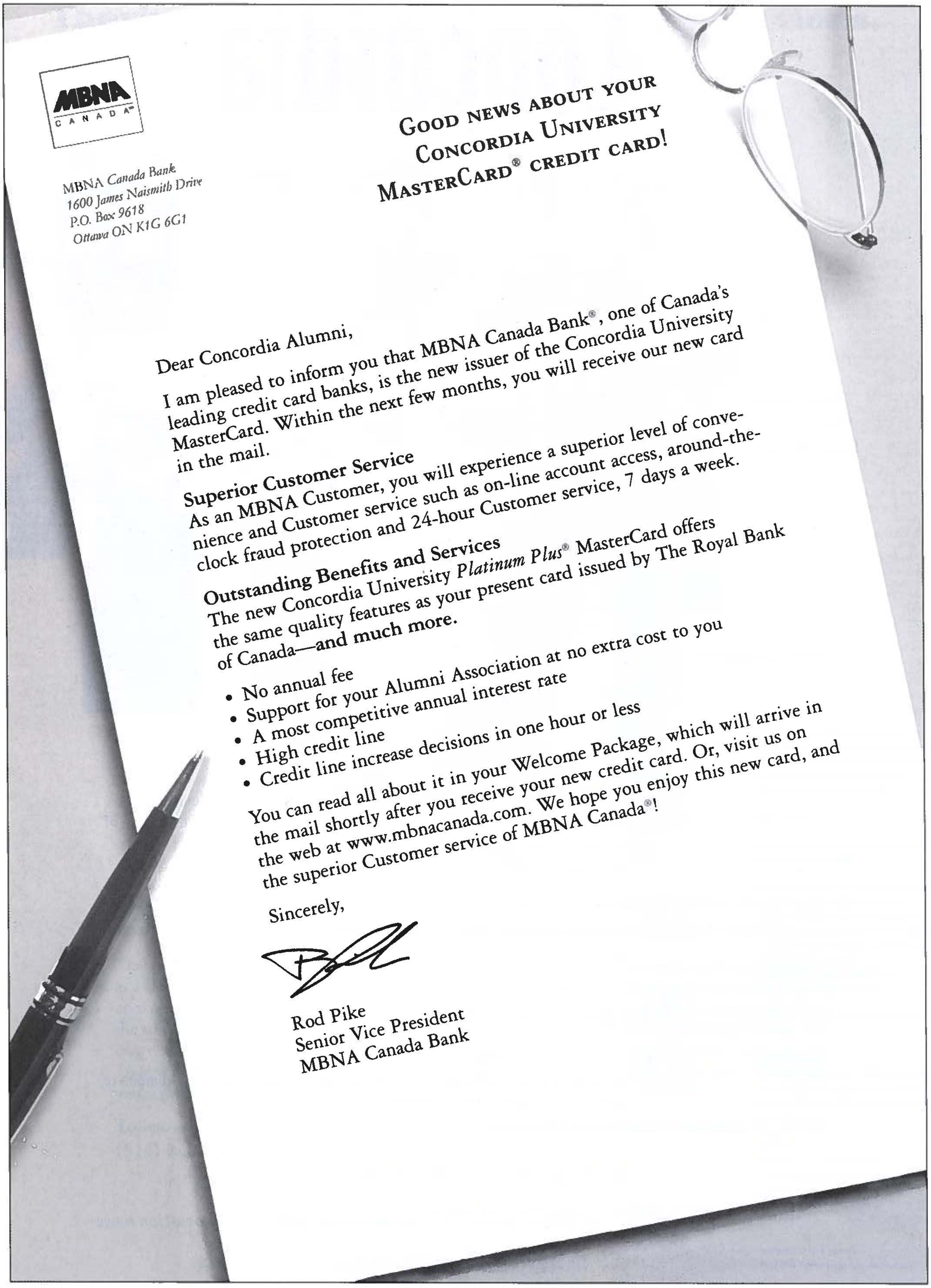

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THE editor's voice

Howard Bokser

A Matter of Death and Life

Pale death, with impartial step, knocks at the hut of the poor and the towers of kings.
— Horace, 65 - 8 BC

WHAT'S HE SO HAPPY ABOUT? HE'S DEAD...
HE GOT AN OBIT IN CONCORDIA MAGAZINE!

While death eventually comes for us all, this has been an especially tough year on celebrities. Film and TV has lost Katherine Hepburn, Bob Hope, Gregory Peck, Elia Kazan — even Jed Clampett, Mr. Rogers and the Maytag repairman. Music and dance will miss Gregory Hines, June Carter and Johnny Cash, Barry White and Warren Zevon (a personal favourite). Add Leon Uris, Althea Gibson, George Plimpton, David Brinkley, John Ritter, Sam Phillips . . . et al. There have been so many celebrity deaths of late that it's been hard to keep up.

But what does it say about us that we seem to care more about deaths of famous folks than we do about the thousands of people who die every day from famine, disease or natural disasters, or are murdered through war or terrorism? It has to do with familiarity, of course. I hate to admit it, but when my dog died this fall, I was more crestfallen than when I hear about violent, senseless deaths on the other side of the world. Although none of us actually knew Bob Hope or Johnny Cash, their presence on our TVs or CD players made it feel like we did — unlike more tragic but distant victims. Joseph Stalin unfortunately knew this too well; as he put it, "A single death is a tragedy; a million deaths is a statistic."

This is a built-in defense mechanism. We couldn't function if we grieved all human suffering. And in the simplest evolutionary terms, our progenitors' instinct for caring most about the survival of themselves, their mates and progeny both kept them alive and was bequeathed to us.

Our network of alumni is, pardon the cliché, akin to an extended family. Therefore, relating news of the deaths of fellow graduates is an important function for this or any alumni magazine. Our obituary section, In Memoriam, tells you of the passing of people you may have known or, at least, with whom you shared something, as fellow alumni of Sir George, Loyola or Concordia. Our In Memoriam section has always been smaller than those of many similarly sized Canadian universities because our alums are relatively young.

But as the university ages, an unfortunate consequence will be that we'll lose more alumni, and receive more death notices. This issue includes news of the passing of 13 alumni, the most to appear in any issue since I've been here, and a consequence of our maturation. The names on page 35 may not be celebrities, but each of these individuals meant very much to their families and friends — and former classmates — and we mourn them all.

Of course life must go on, and it's been going quite well at Concordia. These past few months have been tremendous for the university, with record enrolments and the opening of the Richard J. Renaud Science Complex on the Loyola Campus. This special issue will highlight just some of the noteworthy research and teaching being done at the Complex and elsewhere at the university, and looks at a few of our successful science alums. These scientists are helping fight disease, save the environment and uncover the mysteries of human biology. In other words, they're working to make our world better and our lives healthier and longer.

Which is a good thing, because as Woody Allen once said, "I don't want to achieve immortality through my work; I want to achieve it through not dying."

university magazine
Concordia

Concordia University Magazine welcomes readers' comments. Letters should include the writer's full name, address, school(s), degree(s) and year(s) of graduation for alumni. Letters may be edited for length and clarity. No letter will be published without the full name of the correspondent. Correspondence should be sent to the Editor, *Concordia University Magazine*, 1455 de Maisonneuve Blvd. W., Montreal, Que., H3G 1M8. Fax: (514) 848-2826, e-mail: **Howard.Bokser@concordia.ca**
web: ***magazine.concordia.ca***

Our New

As Concordia University Magazine of Arts and Science, looks back at its

It's easy for those of us in science at Concordia to be euphoric about the opening of our most impressive new building, certainly among the larger combined teaching and research facilities built in North America in recent years. It is especially sweet for those of us who've been here for many years, and who can reflect on the last two decades, when conditions for science at the university were not always ideal.

During that time, the upper floors of the downtown Hall Building, where many of the science classrooms and laboratories were housed, had become progressively more crowded and outdated. Designed in an era when university education was heavily focused on classroom teaching and descriptive or observational lab exercises, the space was adapted as needed over the years. By the 1990s, the science floors had become a tight mix of all sorts of activities. Labs were side by side with classrooms, and it was not uncommon for technicians with a cartful of chemicals to have to weave through students pouring into the corridors, which were additionally lined with lockers and students eating their lunches. People travelling on the chronically overcrowded service elevator on occasion found themselves in a car full of lab materials and specimens.

But of course, going further back in time, we can find milestones in an earlier growth phase in Concordia's science history, with the opening of the Drummond Science Building at Loyola in 1961 and the Hall Building itself in 1965. These structures were built when teaching was the focus and general science studies were evolving into actual science departments: biology, chemistry, physics, psychology and, later, biophysical education (now exercise science). The growth of science at the university in the four decades since, along with dramatic advances in the study of most science fields, has brought us to a new age of science and science education.

It's all part of the ebb and flow of development, of human activity, culture, new technologies and scientific pursuits. (See "How Modern Are We?" page 40.) For a time, including our time, learning science was all about factual observation, measurement and planned experimentation. In the classroom, there was great emphasis on the formality of the scientific method, with rote lab experiments, dissection, microscopy and classification of dried plants or pickled animals or what not, carried out to confirm a well-established fact, or at best to

Face of Science

celebrates Concordia's science renaissance, Bob Roy, Vice-Dean of Planning for the Faculty more humble roots — and toward its sparkling future.

by Bob Roy and Debbie Hum

confirm some hypothesis. The answer to the experiment was known, and if you didn't get that answer, your experiment was considered a failure.

But while formal methods have advanced science through recent centuries, their limitations have come to be recognized. With the passage of time and further scientific investigation, many standard interpretations thought to be true have turned out to be not quite true, and sometimes dead wrong. (For instance, Concordia scientists are learning that forest clear-cutting practices may not mimic the natural regenerative process of forest fires, as once claimed. See "Forests and Other Family Trees," page 22.)

Today's university science students are involved in much more open-ended experiments, where the outcome is often not known and the interpretation of data, of what the experiment *actually* shows, is paramount to supporting the hypothesis. At Concordia, graduate as well as undergraduate students take part in truly cutting-edge research that often leads to immediate environmental and health applications. (See "Promises and Perils: A Genomics Primer," page 8.) The new facilities, labs and researchers will inevitably draw more funding for research projects, which spills over into more support for graduate students and summer internships for undergraduate students — so more time is spent on learning, rather than working for tuition.

> At one time, professors could commit to memory much of their field. But the growth of knowledge has produced an immense volume of information.

Changes to the teaching environment over recent decades have been dramatic too. At one time, professors could conceivably commit to memory much of the knowledge of their field, know most workers in the discipline and quite confidently make proclamations in the classroom. But the tremendous growth of knowledge, complexity and specialization in science has produced an immense volume of information, along with challenges in the teaching of modern science. For starters, the days when professors could, to a large extent, recycle their course notes from year to year are long gone. Today, many subjects are advancing so rapidly that professors can only try to provide basic highlights in their courses. Their real challenge is to teach students *how to learn*, which, in today's age, means how to find and interpret information.

There's much more scientific research going on at Concordia these days, too. Exercise science is about much more than sweatpants and aerobics classes — it's one of the fastest growing science departments at the university and experiencing exponential growth in research. (See "Exercising Their Minds," page 18.) Concordia also boasts some of the country's top psychology researchers, many housed at the Centre for Studies in Behavioural Neurobiology. (See "Brain Sleuths," page 14.)

The new face of science at Concordia — beyond the Richard J. Renaud Science Complex — comes full circle to interdisciplinary science. The sciences, of course, overlap in many areas, but in the last century and until very recently, scientists have tended to work in silos, and students have tended to specialize within their programs rather than follow a cross-disciplinary curriculum. But this is changing, again. With the new science, researchers and students alike will have to become more broadly based, with a combination of skills in biology, computer science, physics and chemistry.

Collaboration and interdisciplinarity are *de rigueur* today. The Science Complex was built with this interaction in mind, and mixes five different science departments, our outstanding Science College (see "The Best and the Brightest," March 1998) and three research centres with a series of support units under one roof. The academic activities are bound to be stimulating and rewarding.

At the end of the last century, conditions for science research at Concordia may not have always been ideal, but the university continued to produce good science and support excellent scientists. With premium digs at the new complex at Loyola, just imagine the science we'll be producing in the century to come.

Richard J. Renaud Science Complex opens in style

by Barbara Black

Andrew Dobrowolskyj

Elana Trager

Top, Richard Renaud and Quebec Premier Jean Charest, at the opening of the Science Complex on the Loyola Campus, September 22.

It couldn't have been a better day for the inauguration of the new home of Concordia science. The sun shone, the wine flowed and the expressions of gratitude were heartfelt as the university community and guests celebrated the opening of the Richard J. Renaud Science Complex on September 22.

Topping the list of invited speakers was Quebec Premier Jean Charest, who said he's been intensely interested in universities as the result of representing the riding in the Eastern Townships that includes the Université de Sherbrooke and Bishop's, and added that "now it's our turn" to find the funds to support universities. Charest spoke with warmth and informality about the year he taught political science at Concordia in 1994-95, which he called "an absolutely marvellous experience."

Richard Renaud, L BComm 69, the donor after whom the building is named, said that he started studying at Loyola College exactly 40 years ago. At that time, only five per cent of Canadians had post-secondary education; now, it's four times that figure and rising. With government budgets stretched to the limit for health and education spending, he feels we must stabilize university costs.

Renaud joked that he and his wife Carolyn were able to keep up with the progress of the building that now bears his name as they often walked their dog past the Loyola Campus. He also marvelled at how Concordia has leapt ahead in the past decade under the leadership of Frederick Lowy.

Renaud paid tribute to the foresight of Lillian Vineberg, BFA 83, who chaired the committee on the revitalization of the Loyola Campus, and to Jonathan Wener, S BComm 71, head of the real estate committee of Concordia's Board of Governors, who researched the original 1916 design of the buildings and did everything possible to make the new building harmonize with the old.

Faculty of Arts and Science Dean Martin Singer said that the new building gives everyone "a tremendous sense of accomplishment," and it has already enabled the faculty to attract new researchers, grants and students.

The proceedings were emceed by Charles Tisseyre, long-time host of Radio-Canada's science program *Découverte*. Fourth-year psychology student Sebastien Fournier gave a glowing tribute to the Science College, of which he is a member and which has moved from one of the Mackay St. annexes to the new building.

The ceremony also included a native blessing and a ceremonial tree planting. Rector Lowy summed up everyone's mood when he said, "It's a wonderful time to be here."

Concordia's New Face of Science

A Man for Others

by Barbara Black

Andrew Dobromolsky

Richard Renaud, flanked by his wife, Carolyn, and Martin Singer, Dean of the Faculty of Arts and Science, September 22. Renaud, a former president of the Loyola Alumni Association, has long been a supporter of the Loyola Campus's rejuvenation.

Rick Renaud, L BComm 69, thinks of Concordia as "the most under-told story in town," and it's hard to talk to him about his alma mater without getting an extended testimonial for the university. He's a tireless Concordia booster, giving money for scholarships and bursaries, donating to the university's capital projects, and persuading other Montrealers to support the cause.

Renaud is a graduate of Loyola, both the high school and the college. He became a chartered accountant and taught part-time in Concordia's business school in the mid-1970s. He describes himself as a merchant banker specializing in restructuring, and made his career by buying companies and re-selling them. Now he probably spends about half his time being creative with his philanthropy. Renaud says he gets his biggest payback out of helping needy young people, from the exceptional Concordia graduate he is putting through medical school to the hot-meals program he started for teens in Verdun. He's obviously taken the Jesuit motto "a man for others" to heart.

Looking ahead

Renaud reveals a forward-thinking approach — possibly a clue to his business success — when talking about Concordia and university education in general. "Sixty per cent of university graduates are women — 85 per cent in some countries," he says. "The 21st century will be about women [achieving power through devices like] micro-loan programs." He proudly points out how Concordia has been an innovator, but a practical, prudent one. "Big-name schools are spending billions on e-learning programs, but Concordia has been doing this for about $500,000," he says. "Our consumers for e-learning will be baby boomers, and it's not something that's elite-driven. We can deliver education electronically to remote places like Lesotho [South Africa], and e-education will lower our costs."

Ever optimistic, Renaud feels the "funding and political slump" in Quebec over the past decade helped position Concordia "for future fundraising. Our capital campaign [1996-99] put us on the map. Sure, we have had of challenges — big community donors were affected by the Netanyahu affair — but the tide is changing," he says.

Tellingly, Renaud eagerly displays an album comprised of touching letters from students who received bursaries through the years. He's stunned by the enormous need out there, and he would like to see his wealthy friends, and maybe some of the rest of us who are just comfortable, take a needy student under our wing to support their education.

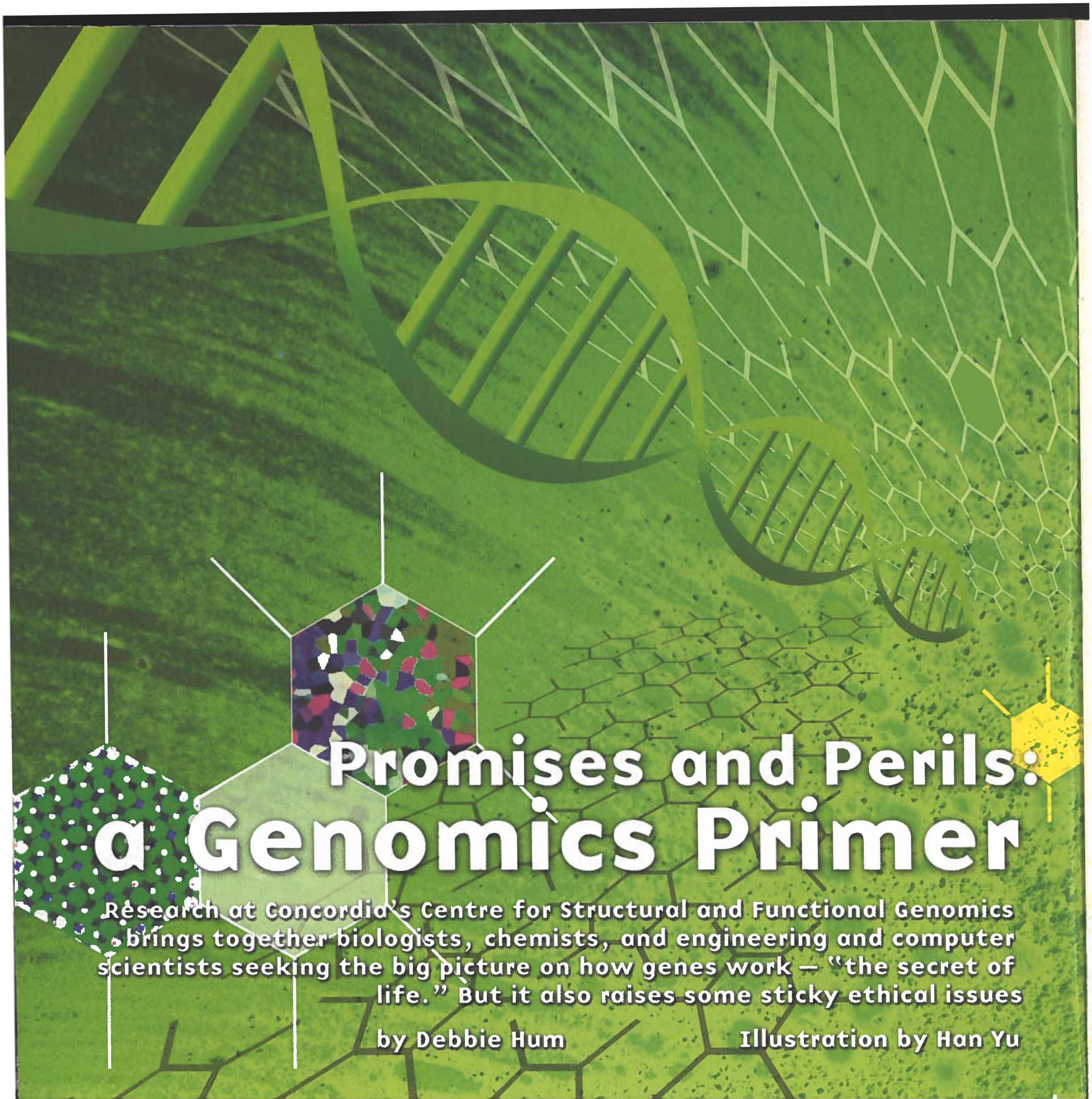
A modest philanthropist

Renaud joined Concordia's Board of Governors in 1989, but it was the crisis of the four slain engineering professors in 1992 that really piqued his interest. He has been more active since then — as the board's vice-chair and on its advancement committee, on the advisory board of the Faculty of Engineering & Computer Science, and as vice-chair of the Concordia Foundation.

In person, Renaud is modest, even shy. He rarely gives speeches, doesn't want to chair Concordia's board, and at first declined media interviews at the opening of the building named after him. (He was eventually convinced otherwise.) He did make a speech this summer in England at the invitation of the Oxford Round Table, a conference on university administration. In it, he pointed to the need for philanthropists to close the widening gap between inadequate funding and increasing need, relating Concordia's experience.

While Renaud has no special affinity with the sciences — despite his name now being attached to the science complex — the idea of the new building thrills him, particularly the effect it will have on the gracious but sleepy west-end campus he knew as a student. He points out that he and Carolyn have lived their entire lives in the west end, and he's glad to have helped infuse the neighbourhood with life.

"It makes a statement about excellence," he says of the Richard J. Renaud Science Complex. "It's the most modern building of its kind, in an unbelievable location. Concordia is really poised to go forward now."



Promises and Perils: a Genomics Primer

Research at Concordia's Centre for Structural and Functional Genomics brings together biologists, chemists, and engineering and computer scientists seeking the big picture on how genes work — "the secret of life." But it also raises some sticky ethical issues

by Debbie Hum

Illustration by Han Yu

Tomatoes genetically altered with a fish gene to delay ripening, rice spliced with a daffodil gene for enriched nutrition, or soybeans engineered with a gene from a Brazil nut for better pest resistance; 50 years ago, such "Frankenfood" — readily available in supermarkets today — could only have been found in the imaginations of sci fi writers such as Asimov or Bradbury. Yet it was 50 years ago that the first scientific steps towards these genetically modified foods were taken, with the discovery of the DNA double helix structure by two unconventional scientists, Francis Crick and James Watson.

DNA is the stuff that genes are made of, Crick and Watson showed, life's vessel for genetic and hereditary information. In the years since, their findings have revolutionized the unending scientific pursuit for "the secret of life." Over the past two decades, DNA technologies have helped prolong lives with much better diagnosis of diseases and vaccines, and genetically modified crops are expected to augment food production in developing countries. But it's also spurred debate, from Frankenfoods to stem cell research and much else.

Researchers at Concordia's Centre for Structural and Functional Genomics (CSFG) live in this world. The Centre was launched in the spring of 2000, with foundational support of more than $3million from government sources and another $1 million from industry. In their new Science Complex home, the CSFG's 13 professors enjoy a collaborative environment. The molecular biologists construct gene libraries and determine the DNA sequence of genes. The computer scientists set up relational databases to store the data and supervise the automated annotation of the gene sequences. Biologists use the sequence information to devise a strategy to produce the gene products. Biochemists use various chemical and physical methods to characterize the properties of the gene products (see sidebar, p. 10). Says biology professor and CSFG director Adrian Tsang, "The scientists are passionate about their work and genuinely believe that it is for the public good and that they can find a more sustainable way for industrial development."

The origins

Gene research — and controversy — began in earnest after the 1859 publication of Darwin's *On the Origin of Species*. Over the next century and a half, the field of genetics opened up a vast new era of scientific inquiry, with major breakthroughs in gene and DNA research, such as by Crick and Watson.

The launch of the Human Genome Project in 1990, which aims to identify all the approximately 30,000 genes in human DNA and determine the sequences of the three billion chemical base pairs that make up human DNA, has heralded yet another major turning point. Tsang points out that the Human Genome Project is a misnomer, because the early work involved determining the bacterial genomes and genomic sequencing of model organisms. Some genomes sequenced as part of the human genome project include fruit flies, worms and yeast — in 1996, Concordia biology professor Reginald Storms was part of the international consortium that sequenced the first yeast genome. Storms's work is enormously significant, since yeast is a complex organism, characterized by a cell with a nucleus, which is proving to be a remarkable model for human cells. This research may lead to a treatment to halt the growth of cancer, among other hopeful medical applications.

While traditional gene research focuses on any one or a group of genes, genomics is a systemic "big picture approach" that looks at the entire genetic makeup of an organism to understand how all genes are involved, explains Tsang. "Previously, scientists were like hunters or detectives, looking for and following clues. Genomic research is different because we are like gatherers; we pick up all the different information and build a picture out of it. It's a very different approach — we want to produce the entire road map."

The genomic research on model and other organisms at the CSFG yields key information that can then be extrapolated to help understand more complex systems. "Model organisms are important because we can do experiments on them and find out what specific genes or groups of genes do. We can't experiment genetically on humans, but we can look at whether the genes that are common in humans work in the same way," Tsang says; so understanding genomics at the simpler level is as important to the big picture as characterizing the genes in human DNA.

CSFG director Adrian Tsang. The CSFG draws competitive funding for genomic research projects that have provided training for many graduate and post-graduate students. A graduate diploma in biotechnology and genomics is currently under development in the Faculty of Arts and Science for September 2004.

Other functions

The research at the CSFG has other applications. Biology professors Patrick Gulick and Luc Varin are trying to identify plant genes that tolerate low temperatures and frost, particularly significant for Canada's short growing season and severe winters. Their work may also lead to crop production in ordinarily non-agriculturally viable areas and crops more resilient to new environmental stresses due to climate change. Tsang and a team of researchers are working with biological enzymes found in fungi to develop processes to replace harmful chemicals used by industry, such as bleaches for whitening paper. Another biologist, Vladimir Titorenko, studies the molecular mechanisms that regulate formation, growth and division in yeast, which may give rise to key information on human development and physiology and shed light on some genetic birth disorders.

Without question, the very possibility of plotting the entire genomic road map has been largely driven by the growth of computer science and biotechnology over the last decade, along with the development of immense scientific data processing, storage and exchange capacities, part of the emerging discipline called bioinformatics. At the CSFG, engineering and computer science professors Greg Butler and Clement Lam provide

> Previously scientists were like hunters or detectives, following clues . . . we are like gatherers; we pick up all the information and build a picture out of it.

critical behind-the-scenes expertise in mathematical and statistical modelling, algorithms, data management, pattern recognition and machine learning.

Given the sheer volume of data involved, open sharing of information is a necessary characteristic of moving forward this branch of science. "There has never been such openness in science," says Tsang.

No lack of controversy

Tsang recognizes that while genomics and the field of biotechnology hold exciting promise, they also present "huge" ethical, social and ecological challenges. Genetic testing for medical conditions, for instance, may help prevent the onset of disease, but can also lead to discrimination. There are also legal challenges – should people with a genetic marker for violence be absolved of their criminal actions? Who should have access to genetic information – not to mention access to the technologies themselves?

Genomics also raises unprecedented social issues involving its governance and application. For example, genetic testing can lead to profound psychological effects for people who test for hereditary diseases and to radical preventive measures by people told they have a high possibility of developing certain diseases. (See "Que Sera Sera," September 2001.) "Society will have to come to grips with these very complex issues and hopefully find ways to deal with them," Tsang says.

Funding of genomics research is another ethical landmine. Because of the vast resources required, industry is becoming increasingly vital. Tsang is aware that "the line between universities and industry is blurring." And because profit is involved, genetic engineering is seen as "tainted" and still has to gain general acceptance.

Paradoxically, Tsang feels, there is more public pressure than ever to come up with discoveries that people can relate to and benefit from. "When it comes to human health, particularly at the individual level, genetic therapies that are not particularly liked are accepted if they offer a cure for a disease or immediate benefits to everyday life," he says. But even with the new technologies speeding up research, Tsang notes that it can still take many years and many mistakes in order to get to the right answer.

The human quotient

Humans, Tsang observes, have long overestimated their genetic complexity. He says, "A few decades ago, humans were thought to have about one million genes. Then the popular estimate fell to around 100,000 genes. It turns out that humans have about 26,000 genes – and in the scheme of things, we're not all that different from other living organisms." It is shocking for many that plants and trees have more genes than humans, Tsang says, adding with a smile, "We're only 300 genes or so away from a mouse and about 100 genes or so different from a monkey."

As it unfolds, Tsang believes that genetic research will clearly continue to challenge humans to rethink and re-evaluate their role on the planet. "Biologists have never thought of humans as the top of the evolutionary ladder," he says, "knowing that other organisms do a lot more to survive and are much more sophisticated in some ways. But the science is so much more complex. And it's still one of the many life mysteries that we don't understand."

Debbie Hum is assistant editor of Concordia University Magazine.

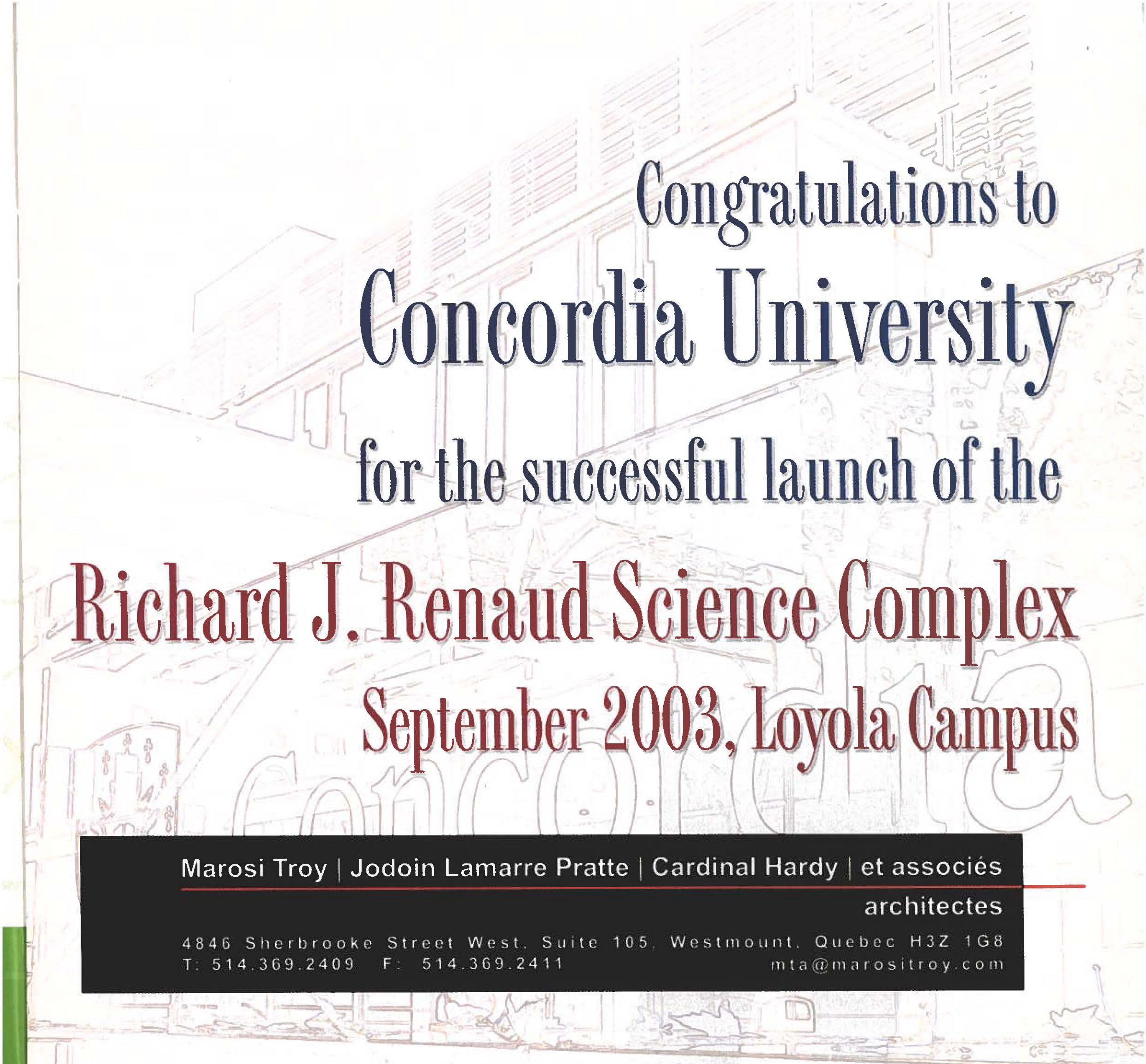
For more information about the CSFG, visit **gene.concordia.ca.**

Perfect Chemistry

Researchers in Concordia's Department of Chemistry and Biochemistry play an integral role in the cross-fertilization of expertise in the university's science departments.

The Faculty of Arts and Science hopes to soon establish a Multidisciplinary Research Facility for Chemical and Systems Biology, as the pivotal research and technology hub for researchers from the departments of chemistry and biochemistry, biology, psychology and exercise science. Here is a sampling of current projects led by chemistry and biochemistry researchers:

- Professors Christine DeWolf, Ann English, Joanne Turnbull and others are working with biologists to develop improved enzymes and catalysts, bio-friendly substances that can be put to industrial use. Members of the Centre for Research in Molecular Modelling, led by director Gilles Peslherbe, design the complex computing systems for this research.
- Professors Le Van Mao, Yves Gélinas, Philippe Merle and Justin Powlowski are working with biologists to develop green solvents, biodegradable materials and sustainable chemical processes to reduce the generation of substances hazardous to human health and the environment.
- Professors Justin Powlowski and Paul Joyce are trying to harness the potential of fungi, bacteria and yeast to degrade chemical waste and environmental pollutants.
- Professor Marcus Lawrence and Cameron Skinner and exercise science researchers are developing improved microfluidic devices to correlate changes in hormone, neurotransmitter and metabolite levels with behaviour, physical capacity and disease.



Congratulations to

Concordia University

for the successful launch of the

Richard J. Renaud Science Complex

September 2003, Loyola Campus

Marosi Troy | Jodoin Lamarre Pratte | Cardinal Hardy | et associés

architectes

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Make a difference!

Georgians Score Another Goal for a Friend

In April 2003, the Sir George Williams championship hockey team of 1965-66 was inducted into the Concordia Sports Hall of Fame. Reuniting with teammates from more than 35 years ago brought back many fond memories and caused us to reflect on the impact that the university experience had on our lives. It was a great thrill to play for the Georgians in front of large crowds at the Montreal Forum, and we shared lots of laughter and developed wonderful friendships while profiting from a quality education.

At our reunion, we recounted many stories of our "glory days," and remembered teammates who are no longer with us. One such teammate is Paul Lemire. His unassuming manner, sensitivity and generosity made him an unforgettable character, until his untimely death in 1995. The Georgian team wanted to pay tribute to our school, to our team and to Paul in a lasting way.

Working with Concordia's Office of University Advancement, Harold Wenger, S BA 67, Hector McFadyen, S BA 66, and I invited our teammates to contribute to an endowment fund established in Paul's name. So far, more than $35,000 has been raised for the ***Georgian Hockey Bursary Endowment in Memory of Paul Lemire.*** An annual bursary will be awarded for the first time in 2004 and in perpetuity thereafter to a member of the Concordia men's or women's hockey team who exhibits the fine qualities for which Paul is so fondly remembered. This is an important **legacy for the Georgians and a fitting tribute to our friend Paul.**

I had already been co-chair of the Toronto Division of Concordia's Annual Campaign, but this experience has allowed me to know how gratifying it is to honour a friend in this manner. If you wish to recognize someone who has made a difference in your life, I encourage you to consider endowing an award in his or her name. It is a worthy demonstration of praise and, of course, a generous investment in the life of future students.

Trevor Kerr

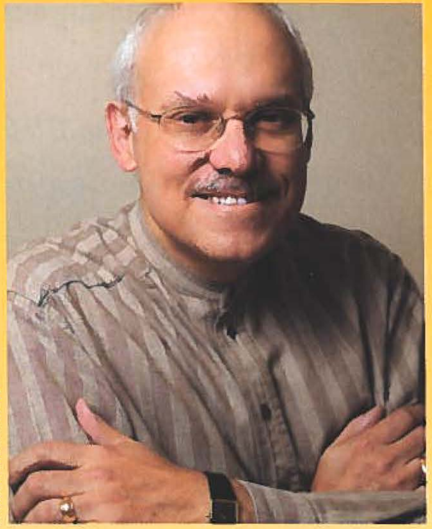
Trevor Kerr, S BComm 67
Co-Chair, Toronto Division
Concordia University Annual Campaign
V.P. and Secretary, Brascan Financial

For more information, please call the Office of University Advancement & Alumni Relations at 1-888-777-3330 or (514) 848-2424 ext. 4856.

Turning a Corner

BY CALVIN S. KALMAN

Physics professor Calvin Kalman completed his 35th year teaching at Concordia in 2003. He was chair of the physics department from 1983 to 1989. He has chaired five international conferences in high energy physics since 1996.



Physics professor Calvin Kalman won the Concordia University Council on Student Life Teaching Award in 1998 and the Canadian Association of Physicists Medal for Excellence in Teaching in 1999.

ANDREW DOBROWOLSKYJ

The Department of Physics has enjoyed a great history at Concordia. But as retirements over the past decade reduced the number of full-time faculty from 14 to seven, it is not surprising that the department has reached a turning point in its history. The university recently suspended admissions to the regular physics programs while the department, in concert with the dean and other science departments, examined its future.

But now, with a new chair — Marianna Frank, BA 78 — in a new building, the department is getting ready to hire new faculty and to move in exciting directions.

The physics department has always emphasized good teaching. Many exceptional students have either chosen Concordia physics as a first choice or transferred from McGill. In the days before the tech crunch, major corporations particularly sought Concordia students. Those seeking further training ended up in schools such as MIT, the University of California at Berkeley, Oxford and Cambridge. Some graduates are now university professors. Some own modest companies. Concordia was one of a select few schools that had students win the top Natural Sciences and Engineering Research Council graduate fellowship awards in the same year. Professors Barry Frank, Sushil Misra and I all employ innovative teaching methods. Perhaps for this reason, when the department has undergone appraisals — as it did in 1993 — it was found that the full-time equivalent student per faculty ratio was higher in physics than in her sister science departments.

THE EARLY DAYS OFTEN SAW PROFESSOR KOVACS PLAYING SOCCER WITH THE STUDENTS, AND THE OCCASIONAL IMPROMPTU SNOWBALL FIGHT.

The department has experienced some interesting times. In 1969, Loyola College decided not to renew the contract of physics professor Srinivassa Santhanam, who went public and received strong student support. Loyola president Patrick Malone convoked an extraordinary meeting of the department to get backing for the administration. Soon after, 50 people occupied the Administration Building for five days over the issue, ending only when the riot police were called in, resulting in the closing of Loyola for a week.

The Air India crash in 1985, when more than 300 people were killed en route from Montreal to Delhi, hit the department hard. Nishith Mukerji, L BSc 73, MSc 80, PhD 85, was a beloved teacher at Loyola High School and completed his university degrees part time. Gyan Upreti was a visiting professor in the department and shortly before leaving Montreal was informed that he had been promoted to full professor at the Indian Institute of Technology at Kanpur. Nishith Mukerji and his wife, and Gyan Upreti, his wife and young son all perished in the Air India disaster.

But there are good memories, too. In 1968 the physics department became one of the first at Sir George to offer a PhD. The early days often saw Professor Rudi Kovacs playing soccer with the students, and the occasional impromptu snowball fight between students and faculty. In later years, the semester often began with a student-faculty picnic at locations such as St. Helen's Island.

Research in the department has varied, covering applied physics, statistical physics, condensed matter (solid state) physics and high energy physics. Our professors regularly give presentations at international conferences. Marianna Frank collaborates with high energy theorists in Montreal, Chicago, Helsinki, Taiwan and Bombay. Panagiotis Vasilopoulos collaborates with theorists in Belgium, Ukraine, France, Australia, the U.S., Halifax and Vancouver. Sushil Misra works with professors in France, Australia and the U.S.

One problem is that although Concordia physics professors have often been recognized for the quality of their research, they have mostly been working in quite different fields. To remedy this, recruitment of new faculty will all be in a single area of research. With the latest hiring, the department will embark on a bright future.

Brain

Researchers at Concordia's Centre for Studies in Behavioural Neurobiology examine what happens in the brain to cause addictions

by Jason Gondziola

photos by Christian Fleury

Broken homes. Lost work productivity. Health problems. Financial ruin. Emotional trauma. Physical and psychological abuse. Suicide or overdose.

These are just some examples of the potential damage caused by addictions. Understanding the roots of addiction, therefore, has great individual and social benefits. And from the relatively benign — caffeine or cigarettes — to the more troubling — drugs or gambling — addictions share common features.

Enter the researchers at the Centre for Studies in Behavioural Neurobiology (CSBN), operating within Concordia's Department of Psychology, who are making headway in uncovering clues about this troubling aspect of human behaviour.

The CSBN, founded in 1981 as a research centre to study drug abuse, now focuses on all things neurological. In its new home at the Richard J. Renaud Science Complex, the CSBN's eight full-time faculty members (with two more on the way) and roughly 60 undergraduate and graduate students study alcohol and drug dependence, eating and drinking habits, reproductive behaviour, stress, circadian rhythms, and learning and memory. CSBN researchers and students are also involved in activities at McGill and Université de Montréal.

CSBN director Barbara Woodside explains that researchers at the Centre contribute their findings to the collective work. "This means that colleagues will understand what you're talking about, yet their work is different enough to be able to provide different perspectives," she says. "This makes it a very good environment for collaboration and training because it's easy for students to go from lab to lab and learn different techniques and approaches."

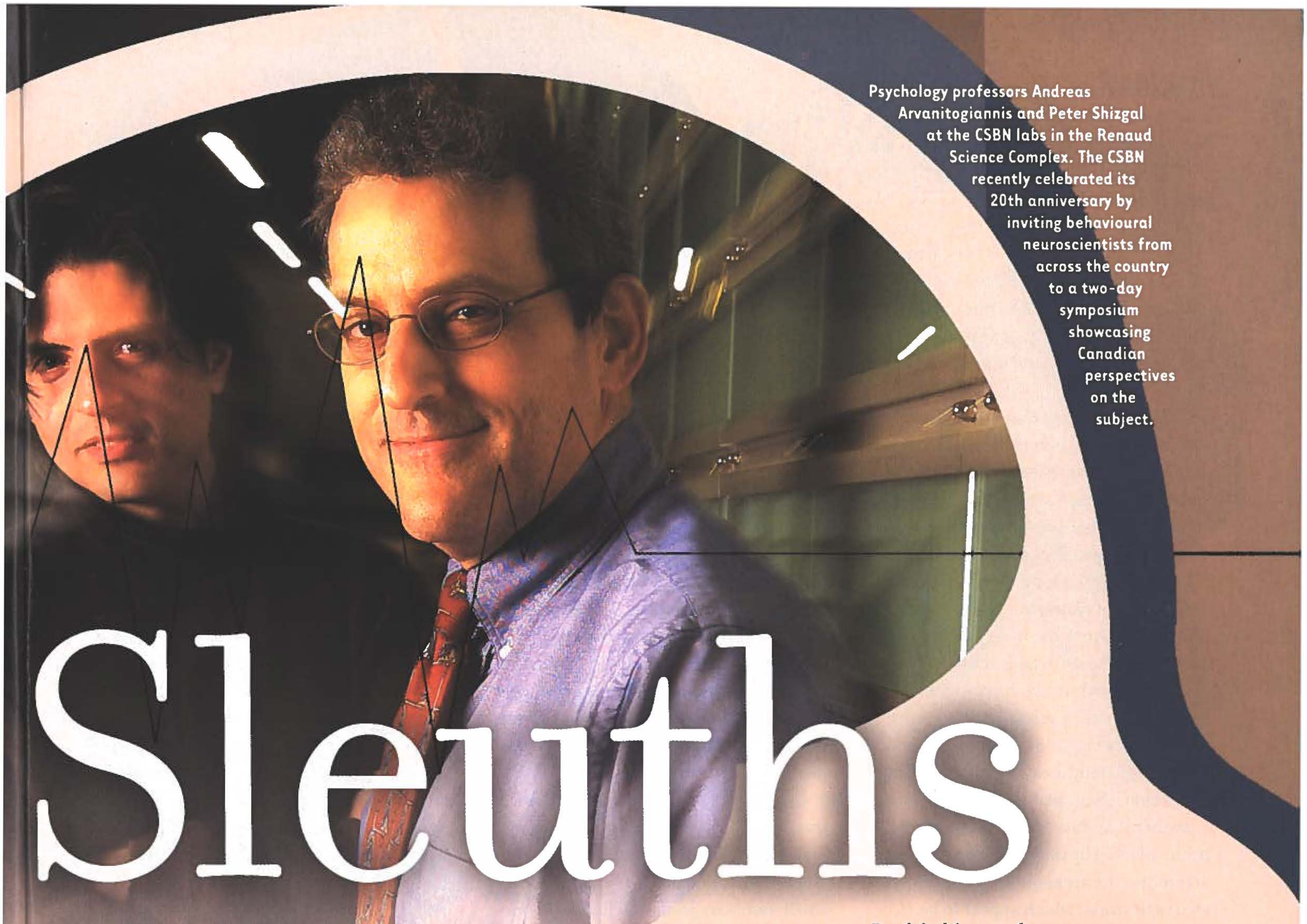
It is quite fitting, then, that in the quest to understand neural systems, the shared structure between researchers at the CSBN — including the three psychology professors featured here — should begin to resemble a neural network itself.

Drugs and motivation

Andreas Arvanitogiannis, BSc 90, MSc 93, PhD 98, investigates long-term changes in the brain due to drug dependence, but this, he maintains, is merely a means to a more universal end. "My general interest is in the area of motivation and goal-directed behaviour, and the drugs of abuse are a tool for probing the mechanisms that underlie motivation and motivated behaviour," he says. "We know exactly where drugs act in the brain, we know what neurotransmitters they're affecting, so we have a good starting point to investigate what happens once the drug is there and what mechanism is set in motion to eventually lead to addiction." His work includes identifying proteins found in higher than normal concentrations in the brains of addicted animals.

Arvanitogiannis, who holds a junior Canada Research Chair in Behavioural Neurobiology, continues: "The new thinking is that addiction shares a lot with learning. One part of my research is to try to define certain molecular modifications that have happened in reward circuitry, in drug abuse, but also to try and see what other systems are involved."

While other experiments have shown morphological changes from forced injection of drugs, Arvanitogiannis says there has been a shortage of studies that investigate these changes due to addiction. The prime neural system in drug research has long been the dopamine system, which is implicated in many behaviours and motivations, from sex to video games. But this interconnectedness makes the dopamine system a poor candidate for direct treatment of addiction; inhibiting the system could result in



Psychology professors Andreas Arvanitogiannis and Peter Shizgal at the CSBN labs in the Renaud Science Complex. The CSBN recently celebrated its 20th anniversary by inviting behavioural neuroscientists from across the country to a two-day symposium showcasing Canadian perspectives on the subject.

Sleuths

a global loss of motivation in patients.

Arvanitogiannis also investigates attention deficit hyperactivity disorder (ADHD) and the correlation between those afflicted with it and an increased tendency toward drug addiction. His most recent findings indicate that there is indeed a correlation, but that it is time-dependent and linked to the development of the organism.

> WE KNOW EXACTLY WHERE DRUGS ACT IN THE BRAIN, SO WE HAVE A GOOD STARTING POINT TO INVESTIGATE WHAT HAPPENS AND WHAT MECHANISM IS SET IN MOTION TO EVENTUALLY LEAD TO ADDICTION.

"The effects of Ritalin are different depending on the age when it is administered," he says. "Children or adolescents who take Ritalin later on in life show aversion for cocaine. That's a paradox. But rats given Ritalin as adults actually show preference for cocaine. So depending on when, during development, we give the drug, there are different outcomes in terms of possibilities of becoming an addict."

Pinpointing the exact causes of this dual interpretation of drugs could prove useful in treating addiction — artificially inducing the developmental changes that promote aversion for drugs, which could both serve as a preventative measure and help break pre-existing drug habits.

Rethinking relapse

Getting off drugs is one thing. Staying off them is another.

Relapse is an all too common problem in drug abuse, and former addicts can find themselves drawn back into their old habits, often months or even years after being clean. It's a well-known phenomenon, and anybody who has quit smoking and decided that one more puff wouldn't hurt, only to find themselves buying a pack a week later, can certainly attest to it.

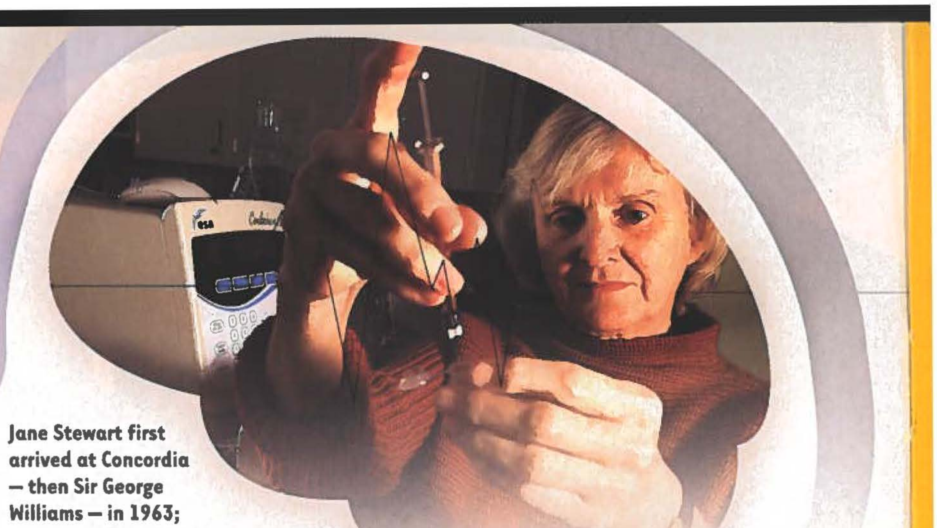
Such is the focus of Jane Stewart, who

is currently studying relapse using rats that have been trained to self-administer drugs. She first became interested in this field 22 years ago, when she worked with one of her graduate students to find a way of studying relapse to drug use in animals. "If you train animals to take drugs, and then take the drugs away, the animals stop trying to take them," she explains. "And when we give them a small injection of the drug, the old behaviour resumes."

Stewart describes three categories of effective relapse inducers in humans and animals: the drug itself; stimuli that are paired with drugs, such as setting and other situational cues; and stress. Her current research focuses on the latter. "We use the same kind of procedures, but instead of giving the animal drugs, we stress the animal and then give them an opportunity to try to take drugs," she says. Some research indicates that the tendency for relapse is greater months after drug use has stopped, which hints at a long-term modification that takes time to develop, she explains.

Rather than focus on the areas of the brain affected by the drug directly, Stewart studies the areas of the brain associated with stress, which appear to be sensitized by drug use. "Most of the research concentrates on the dopamine systems, because people are looking at the effects of drugs as priming for relapse, because they know those were the systems on which drugs act," she says. "What we've found is that the systems that mediate the stress effect are quite different."

Stewart is also part of a large, ongoing cross-country research project on drug abuse, which includes data from Vancouver, Edmonton and Toronto. Her specific role in the project is to investigate the mixed usage of cocaine and heroin, prevalent amongst Montreal heroin users, again using animal models. "The rats have one lever that's heroin and one lever that's cocaine, on alternate days," she says. "We allow them choice to see which they prefer. Usually the animals will show much more response to cocaine."



Jane Stewart first arrived at Concordia – then Sir George Williams – in 1963; in 1981 she helped found the CSBN.

Spinning the wheel

While gambling has obvious differences to substance abuse, the overlapping questions of addiction and dependence run strong throughout. That's where Peter Shizgal steps in. "I'm interested generally in brain reward circuitry, and in how animals and people make decisions, and how their internal physiological state affects the decisions that they make."

Using functional magnetic resonance imaging, Shizgal and his collaborators look at patterns of brain activity while people are anticipating or experiencing small monetary gains and losses. In one research test, volunteers were involved in a sort of limited Wheel of Fortune game, which had three different spinners, each divided into three sectors. Each spinner was intentionally weighted towards winning, losing or neutrality.

"The values were crossed across the spinners, which allowed us to do some interesting types of control," he says. "Anticipation would occur when you're lying there and you see which spinner you drew on that try. If the one that was labelled in green came up, then you knew you had a chance to win $10. If the one that came up had red segments on it, you knew you had a chance of losing $6."

This preliminary study found a striking overlap at times between the activation patterns for strong anticipation and the activation patterns when people found out whether they won or lost. Supported by pre-existing data, these regions are where it is believed rewards are processed. "These studies suggested that maybe components of the circuitry that are processing biological rewards in lab animals might be put to work when we're evaluating a social reward ourselves."

These evaluations, Shizgal reveals, are relative. He gives the example of receiving a raise, only to find out that a lazy co-worker received a larger raise. "All of a sudden this thing that was a gain may actually have become a loss," he says. "These are called counter-factual comparisons, and were built into our design, because the same monetary results occurred in a variety of different contexts."

Looking ahead, Shizgal posits the possibility of investigating the same phenomenon in problem gamblers, to see the variance from their non-problematic counterparts. "What's different between the way that the experiences are processed by the problem gambler and the social gambler? Could we shed some light on that?" he asks. "Well, it's at least possible that we could, but that the differences lie at the level that we're not going to be able to see with these sort of methods. That would be interesting." And possibly shed further light on all sorts of addiction.

Jason Gondziola, BA 03, is a Montreal freelance journalist.

For more information about the CSBN, visit **csbn.concordia.ca**

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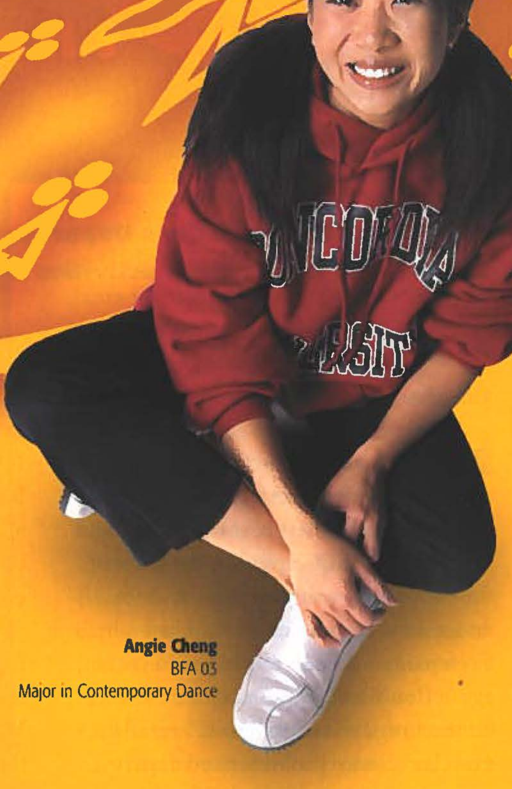

Angie Cheng
BFA 03
Major in Contemporary Dance

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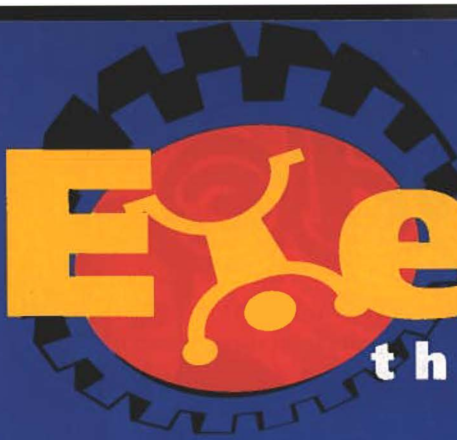


Exercising their minds

New blood in Concordia's Department of Exercise Science has invigorated its research activities — and academic credibility

by James Martin
photo by Ari Tapieri

Those in Concordia's Department of Exercise Science are doing their best to let the world know that their discipline, once lost in the cracks between medicine, science and sports, is about more than just sweatpants. "When I was hired 20 years ago at Concordia, there was an emphasis on teaching and not research," recalls exercise science professor and department chair Robert Kilgour, BSc 76. "If you talked to anyone in the faculty, the major topic would have been, 'I'm excited about the course I'm teaching,' " he says. "Today, it's research."

While Kilgour's research interests made him the exception to the rule back then, not so now. Teaching remains important, but the department's emphasis on research has increased exponentially. Between 1999 and 2002, seven new exercise science faculty members joined the department, all chosen for their strong fundamental science backgrounds and research activities. We introduce you to three of them.

Question of balance

Alain Leroux's research background fit the department's current criteria to a T. In fact, he was still working on his PhD dissertation, about the potential for exercise programs to help people with incomplete spinal cord injuries walk again, when he signed on at Concordia in 1999. "There's a growing need for what we now call clinical exercise physiology," Leroux says. "Whereas the main focus of this program has been on athletic therapy, the last 10 years has really seen a shift toward looking at the effect of exercise on various diseases or chronic conditions."

Leroux is currently interested in helping people with neuromuscular problems, and he works closely with the Maurice Gross Family Wellness Centre at the Cummings Jewish Centre for Seniors (run by Maria Fragapane, BSc 93, and Giancarlo Bastone, BSc 94, Concordia exercise science graduates). Drawing his research subjects from the Centre's clientele, Leroux is investigating how long-term exercise programs can increase mobility, strength and balance.

IT COSTS $800 PER DAY FOR A PATIENT TO RECOVER IN HOSPITAL. IF THERE ARE 6,000 SURGERIES PER YEAR, AND YOU CAN REDUCE RECOVERY TIME BY ONLY ONE DAY, THAT'S A LOT OF MONEY.

"The research I'm doing is mainly involved with people who have had a stroke," he explains. "We're working with people who have one side of their body paralyzed or very weak, so they have a hard time walking, balancing and producing a good muscle contraction. They tend to compensate on their good side," he says. "In the case of a stroke, that's the side of the body opposite to the brain lesion affected."

Using extremely sensitive computerized equipment to isolate precisely how an individual moves (one particular platform boasts 2,288 tiny sensors), Leroux hopes to shed light on the post-sub-acute stage of disability. Many studies focus on the six-month period following trauma, he says, but little research has been done on the subsequent months and years of a patient's life. "The main belief was that once a patient reached their maximum strength at six months," Leroux says, "there was nothing more you could do about it. But we've shown that's not the case. We've had people who had their strokes 35 years ago, and they've shown improvement. It's very exciting to see."

Invasive with a purpose

Regina Crameri is the department's newest hire. Fresh from a post-doctorate stint in Copenhagen, the Australian ex-pat came to Concordia in July. Her background is in skeletal muscle physiology, and she's done much work in the area of reverting paralyzed muscle into more functional muscle types. Her current research examines the role of satellite cell activation in increasing muscle fibres. Crameri is particularly interested

Exercise science's Gerald Zavorsky, Alain Leroux and Robert Kilgour in their new Science Complex digs. The department's growing emphasis on research is demonstrated by its plan to launch a graduate studies program in 2004.

in the "cross-talk" between the extracellular matrix ("the mortar that holds the bricks together") and the satellite cells that lie resident on existent skeletal muscle fibres.

By her own admission, Crameri's research is "very invasive." Her subjects — still only in Copenhagen as she awaits a Concordia ethics committee green light — agree to undergo nine muscle biopsies in eight days, and to have microdialysis tubing threaded through their thigh muscles in order to observe the relationship between extracellular matrix remodelling and muscle satellite cell activation during intense exercise. The implications of this research are striking: if exercise can induce a mechanism that activates satellite cells and therefore increases muscle bulk, the disability resulting from muscle disuse due to aging, disease or disability can be averted.

Unlike the work of many others in her field, Crameri admits certain drugs provide an option to re-establish the motor movement in her research, but she feels strongly about sticking to exercise. "It's the healthy alternative," she says, "with very few side effects."

Losing the stigma

Gerald Zavorsky joined Concordia in 2001. A onetime Olympic hopeful who still ranks among Canada's top middle-distance runners, Zavorsky studies pulmonary gas exchange during exercise. Specifically, he's interested in why exercise lowers oxygenation in some people (a phenomenon known as hypoxemia). In other words, Zavorsky studies the mechanics of sucking wind.

His research interests can be directly traced to his running career. Although the traditional notion of improving elite athletic performance is still very much a part of exercise science, Zavorsky is quick to stress the wider societal implications of the research being done today. He says, "Now the work has very practical ends. We use exercise as an intervention, as a way to help other problems." For example, he's applying his research toward the field of prehabilitation, "which is a fancy word for speeding up recovery after surgery by implementing a pre-surgery exercise program."

Bed rest temporarily lowers an individual's components of fitness; one study equates 20 days of bed rest to 30 years of aging in terms of reduced aerobic capacity. Zavorsky is working with gastrointestinal patients at the Montreal General Hospital to see how a three-week aerobic cardio-respiratory endurance-training program impacts their post-op recovery times. Although his study is still in the early stages, Zavorsky reveals that preliminary findings are extremely positive, something that could lead to enormous healthcare financial benefits. He says, "It costs $800 per day for a patient to recover in hospital. If there are 6,000 surgeries per year, and you can reduce recovery time by only one day, that's a lot of money. And that's just *one* day. The cost of the exercise program would be far less than the cost of the time saved in hospital costs."

Zavorsky feels "there's a stigma attached to the name 'exercise science.' People think about exercise science as jumping up and down in aerobics class, without any real science going on, but that's completely *not* what we do." He adds, "We want people to know what we're *really* about: good research with a strong scientific base."

James Martin is a Montreal freelance writer.

For more information on the Department of Exercise Science, visit **artsandscience.concordia.ca/exsci**

SOME DISTINGU

Concordia's science departments have produced thousan fields of study, others not. Here are snapshot biographies

GENEVIÈVE M. PRÉVOST, BSc 93

At Concordia: Honours chemistry

After Concordia: LLB, Osgoode Hall Law School, York University, 1996. Ontario Bar, 1998; Registered Trademark Agent, 1998.

Today: Associate with Toronto law firm Smart & Biggar/ Fetherstonhaugh, Canada's largest firm practising exclusively in intellectual property and technology law.

Focuses primarily on trademarks, and has experience in patent prosecution and litigation and access to information issues as they relate to the pharmaceutical industry.

Registered trademark agent; member of the Canadian Bar Association; Associate of the Intellectual Property Institute of Canada; member of the International Trademark Association.

Concordia memories: "My senior research project under Professor John Capobianco. Although tedious at the time, I do have fond memories of those dreadful 24-hour helium runs and my failed, but valiant, attempts at fully grasping the Judd-Ofelt equation."

Personal: Lives in Toronto with her husband, Alan Teare, and daughter, Amélie, 18 months.

LOUIS MARINOFF, BSc 84

At Concordia: Theoretical physics, Science College

After Concordia: Commonwealth Scholar, 1985-88. PhD, Philosophy of Science, Universi the American Society for Philosophy, Counseling and Psychotherapy, 1 Philosophical Practitioners Association, 1999.

After holding research fellowships at University College and the Hebrew philosophy at the University of British Columbia, and moderator of the Network at UBC's Centre for Applied Ethics.

Today: Associate Professor of Philosophy, City College of New York.

Has been a philosophical counsellor and consultant for 12 years. Past p Philosophy, Counseling and Psychotherapy (ASPCP), and founding pres Practitioners Association; Fellow of the Institute for Local Government a Economic Forum (Davos).

Publishes regularly in decision theory, ethics, philosophical practice and seller, *Plato Not Prozac* (HarperCollins, 1999), textbook *Philosophical P*

Concordia memories: "They are uniformly wonderful. My deepest gratitude goes to Elaine Ne and to whose vision and mentorship I owe my academic career. For sh iad ways of twisting space, at all hours."

Personal: Hobbies: classical guitar; has digitized several albums in diverse idioms.

GREG MATLASHEWSKI, BSc 78

At Concordia: Biochemistry

After Concordia: PhD in biochemistry, University of Ottawa, 1983.

Post-doctoral Research: Molecular Virology, Imperial Cancer Research Fund, London, England, 1983-87. Joined the Institute of Parasitology, McGill University, 1987.

Today: Professor of Virology/Parasitology, and Chair, Department of Microbiology and Immunology, McGill.

Research: Human papillomavirus (HPV) and cervical cancer. "We have identified several oncogenes within the genome of HPV, and our focus is now to define how these viral oncogenes are involved in malignant transformation."

Human Leishmania infection is often fatal, particularly in children in developing countries. "We are now beginning a WHO-supported human clinical trial in Peru for the treatment of cutaneous leishmaniasis."

Concordia memories: "One of my favourite memories is of spending endless hours in the small round library between classes where a lot of studying, homework and some socializing went on. It was a great learning environment because of the close friendships that developed."

UISHED ALUMNI

sands of high-achieving graduates, many working in their
es of five science alumni following interesting career paths

niversity College London, 1992. Certified Mentor of
apy, 1996. Certified Fellow of the American

lebrew University of Jerusalem, became lecturer in
of the Canadian Business and Professional Ethics

Past president of the American Society for
g president of the American Philosophical
nent at the University of Arizona; Fellow of the World

ce and other scholarly fields. Author of international best-
hical Practice (Academic Press, 2001), and *The Big Questions* (Bloomsbury, 2003).

ine Newman, the founder of the Science College, whose favourite word was 'elegant'
For sheer eccentric brilliance, I will always remember Professor Rudi Kovacs and his myr-

dioms. Table hockey: three-time Canadian Open champion.

MAJID FOTUHI, BSc 87

At Concordia: Biology and psychology, Science College

After Concordia: PhD in neurosciences, Johns Hopkins University School of Medicine, Baltimore, Md., 1992.

MD (cum laude), Harvard-MIT Division of Health Sciences and Technology, Harvard Medical School, Boston, 1997.

Today: Director, Memory Disorders Unit, Sinai Hospital of Baltimore; Assistant Professor of Neurology, Johns Hopkins Hospital; clinical instructor in Neurology, Harvard Medical School; neurology consultant, Alzheimer's Disease Research Center, Johns Hopkins Hospital. Member of the American Academy of Neurology, American Medical Association, International Brain Research Organization, Massachusetts Medical Society and Society for Neuroscience.

Research at Johns Hopkins focuses on finding effective ways to prevent memory loss and Alzheimer's disease. Published extensively in international journals such as *Nature, Journal of Neuroscience* and *Lancet.* Has received several teaching awards, including the Distinguished Teaching Award from the American Academy of Neurology in 2001. Also author of *The Memory Cure: How to Protect Your Brain Against Memory Loss and Alzheimer's Disease* (McGraw-Hill, 2002).

Concordia memories: "I'll never forget the day Dr. Elaine Newman welcomed me to the Science College with a smile. Joining the College turned out to be the best decision I made as an undergraduate."

Personal: Married Bita Velashjerdi, BEng 99, in 2002.

HEIDI TISSENBAUM, BSc 86

At Concordia: Biology

After Concordia: MS in physiology, University of Ottawa; PhD in genetics, Harvard Medical School, 1997; post-doctoral fellow at MIT, 1997-2001.

Received Career Award in the Biomedical Sciences, 2001, from the Burroughs Wellcome Fund, given to only 18 scientists from Canada and U.S.

Today: Assistant Professor, Program in Gene Function and Expression and Program in Molecular Medicine, University of Massachusetts Medical School, Worcester, Mass.

"Aging occurs in most living organisms, and yet it is still poorly understood at the molecular level. We use genetic and molecular analysis to understand how genes control lifespan. We believe our studies will be important in understanding the molecular mechanisms of aging and further, may reveal universal components to this process."

Concordia memories: "Working late on my senior year project on rainbow fish, in the lab of Dr. Sylvia Ruby. I had to harvest the fish and extract the parts I needed. I was alone in the basement, which was dark, a bit scary and creepy. When I finally got home that night, my mom served fish for dinner. I couldn't eat it!"

Personal: Lives in Wayland, Mass., with her husband, Allan Dines, a photographer, and children David, 7, and Jared 3.

Forests and Other Family Trees

by Patrick McDonagh
photos by Linda Rutenberg
illustrations by Erin Mark

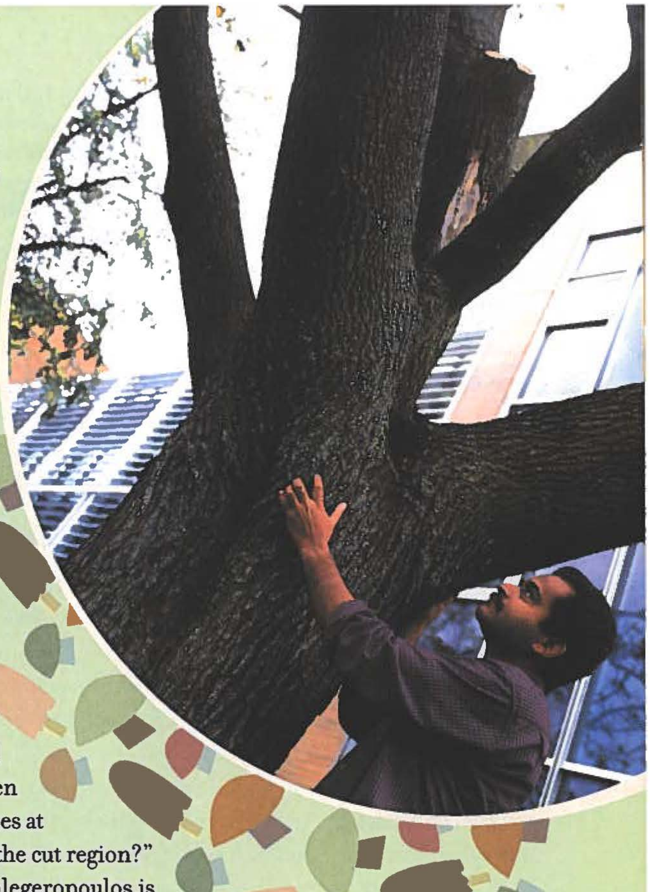
What are dipterocarpaceae or mycorrhizas? Concordia biologists know, and their study of these and other trees and fungi is helping us learn to better share the planet with our ecosystem

Selvadurai Dayanandan was raised amidst the Sinharaja rain forest in Sri Lanka, a world heritage site and repository of tremendous biodiversity, including the giant dipterocarpaceae trees that form a canopy over the forest. This explosion of life inspired Dayanandan, now a Concordia biology professor, to ask, "How does such biodiversity arrive? And once achieved, how is it maintained?" He quenched this curiosity by pursuing an academic career in botany and using the Sinharaja as a research site.

Woodlands across the globe, from the Sinharaja to Canadian boreal forests, present important ecological challenges. From the evolutionary history of the tallest trees to the development of subterranean fungal communities and a host of other issues, researchers in Concordia's Department of Biology, including Dayanandan, combine labour-intensive fieldwork with modern genetic analysis to understand some of the complex ways in which such ecosystems thrive — and in which their survival is threatened.

"The biology department has two main research thrusts," biology chair Luc Varin explains. "One toward molecular biology and the other toward ecology." The 19-member department comprises molecular biology researchers, including Varin himself, who studies biochemical aspects of plant growth; Patrick Gulick, who explores wheat responses to stress at a molecular level; and Elaine Newman, who looks at gene expression in E. coli. In the area of ecology, researchers include Emma Despland, examining insect-plant interactions; James Grant, exploring competitive aggression among salmon; and Paul Widden, investigating the role of fungal systems in forests.

Recently, though, Concordia's researchers have begun blending the two approaches. For instance, those in Dayanandan's lab use both ecological and genetic research in their analyses of biodiversity and regeneration in forests; Widden's doctoral student, Tonia DeBellis, develops DNA profiles of mycorrhizal fungi; Grant has worked with Dayanandan on mapping genetic traits in salmon. "There is a lot of interchange now between molecular and ecology groups," says Varin. Indeed, the department will be hiring a faculty member who will work between ecology and genomics to fill an NSERC senior chair in genomics. In addition, a $3 million Canada Foundation for Innovation (CFI) grant has helped the university establish the Centre for Structural and Functional Genomics, a collaborative research facility on the Loyola Campus that is drawing an ever-widening circle of participants. Broadly speaking, much of the department's research focuses on forest ecosystems, areas where Dayanandan and Widden have distinguished themselves — although as experts on two quite different aspects of life in the forest.



Biology professor Selvadurai Dayanandan shows his affection for trees, at the Loyola Campus. His study of aspen trees has economic and environmental repercussions. While some tree species may take hundreds of years to grow fully, "industry is starting to use aspen for pulp and paper, and they can grow to maturity in relatively few years."

Forest from the trees

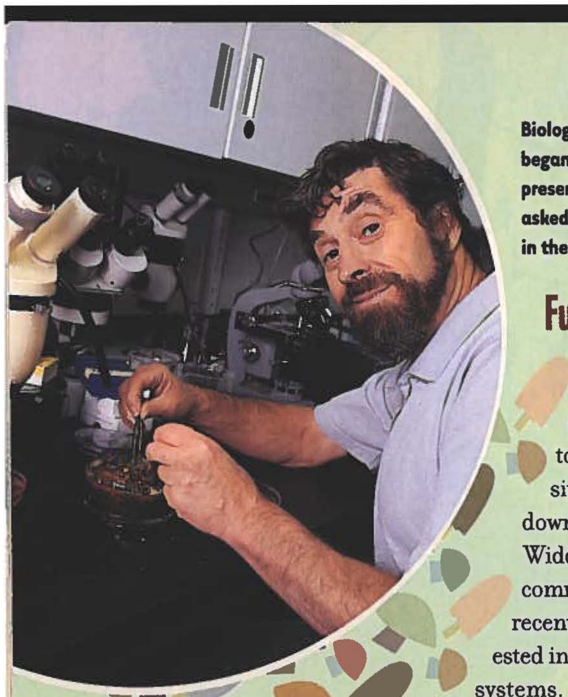
"If you take a big forest, and fragment it by setting up towns, agriculture, or ranching," asks Dayanandan, "do the remaining patches of forest behave normally? Once groups get isolated genetically, they tend to lose diversity." Dayanandan has studied forests on four continents, exploring the parameters that affect biodiversity, and recently collaborated with Concordia geography professor David Greene to explore regeneration in boreal forests in Alberta. When a forest is destroyed by fire, the first trees to grow are aspens, which take about 20 years to reach a large size. The shade cover provided by the aspens enables the growth of spruce, which eventually tower over the aspen trees. As aspens do not prosper in the shade, they die out and spruce become the dominant tree in the forest — until they're wiped out by forest fire and the process begins again. In the natural cycle, fires can be counted on every 100 years or so.

Biodiversity and regeneration are central concerns in Dayanandan's lab, which includes doctoral students Cathy Calegeropoulos and Mona Hamzeh. Calegeropoulos has worked with both Dayanandan and Greene in analyzing seed dispersal — that is, how far seeds travel from the tree that produces them. Her findings will give scientists a better sense of how forests evolve and how biodiversity might be maintained. "For instance, after a clear cut, what is the probability of natural seeding when you have trees at the edge of the cut region?" she asks. Calegeropoulos is now taking DNA from seeds found in the field and using it to identify the mother trees, to track the exact distances travelled. "This way we can really describe what the dispersal pattern looks like," she says.

IF YOU TAKE A BIG FOREST AND FRAGMENT IT, DO THE REMAINING PATCHES OF FOREST BEHAVE NORMALLY?

Hamzeh is investigating stress responses in forest trees. "Most of the genetic markers identified to study evolution in forest trees are neutral markers; no one has targeted specific markers associated with fitness, like salt tolerance, drought tolerance or carbon dioxide tolerance," she explains. "Following genetic tracks among tree species will also give a sense of how different species may have evolved." The work of Calegeropoulos and Hamzeh could have profound implications for forest management and conservation, in addition to telling us how forests come to develop their particular mix of species.

"The focus in our lab is on genetics and evolution, but of course we've developed other related areas," says Dayanandan. "While forestry research is our main interest, the same genetic tools can be applied to other disciplines." As a result, Dayanandan's lab — located in the new Renaud Science Complex — collaborates with other scientists on research into a range of different areas, such as salmon genetics with James Grant.



Biologist Paul Widden in his Science Complex lab. Widden began his career as a fungal ecologist looking for species present in different ecosystems. But when a graduate student asked him to supervise her research on endomycorrhizal fungi in the sugar maple system, he agreed, and hasn't looked back.

Fun with fungi

The forest isn't composed of trees alone, of course, and to understand diversity, one must look down as well as up. Paul Widden studies fungi communities, and more recently has become interested in mycorrhizal fungal systems. "The fungus will grow into the roots of a plant, allowing it to obtain carbon from the plant's photosynthesis," he says. "However, the fungi are also providing nutrients in return." Fungus grows in a structure with filaments spreading through the soil; the whole network is referred to as mycelium.

"It's like a cottony mass," says Widden. "Look at Brie or Camembert — the fuzzy white stuff outside is the mycelium of fungus that ripens the cheese." The forest is rife with mycelia. "The roots of a tree, without the fungus, can't really explore a very great volume of soil, or penetrate into the finest pores within soil," he says. "But when trees are associated with fungi and have the mycelium infiltrating the nooks and crannies of the soil, then the tree has access to much greater amounts of soil, and thus nutrients" — such as phosphorus, nitrogen and microelements. The fungi benefit from photosynthesis.

> LOOK AT BRIE OR CAMEMBERT – THE FUZZY WHITE STUFF OUTSIDE IS THE MYCELIUM OF FUNGUS THAT RIPENS THE CHEESE.

Different types of plants host different mycorrhizal fungi: ectomycorrhizal systems, in which the fungi grow between the cell walls in the root, interact with oak, beech and almost all conifers; endomycorrhizal systems, in which the fungi actually penetrate the cells of the root, favour trees such as sugar maple and cherry, as well as most agricultural crops; ericoid mycorrhiza attach to members of the ericoid family, including blueberries and Labrador tea. Many common mushrooms, including the gourmet delicacy morel mushroom and hallucinogenic "magic" mushrooms, are the fruit of mycorrhizal systems.

Fire vs. cutting

What happens, though, when these symbiotic relationships are disturbed? With funding from the Natural Sciences and Engineering Research Council (NSERC), Widden and his graduate students, Song Cheng and Sarah McNair, are researching this question, in part by assessing the effects of fires and clear cuts. "Fire is a natural regenerative process which clears out the boreal forest on a regular basis," says Widden. "Forest industries claim to mimic the natural regenerative situation." Widden's research will test that claim. Using sites along the forest edge next to a disturbance — a burn or a cut — he and McNair are investigating how below-ground processes differ between the disturbed and the presumably undisturbed areas. "How does the mycorrhizal fungal system shift, how does decomposition shape the system, and how do nitrogen and nutrient levels shift as a result of a disturbance? Our hypothesis is that you have very different nutrient dynamics when you have a fire as opposed to clear cutting, where you lose the nutrients when you lose the trees.

"There were so many assumptions that had never been tested," he continues. "Most people didn't work with communities, but with the relations of specific fungi to specific plants. Much of this sort of research is closely tied into benefiting crops and trees" — for instance, by creating an inoculum, a fungal injection that would help plants grow. "But plants treated with an inoculum often do not thrive in a natural environment," Widden points out. "A better approach is to understand the system and then adapt your practices to it. But while this approach helps the farmer and the crops, [agricultural-product giant] Monsanto doesn't get anything."

The urge to produce something marketable points to a fundamental problem, he argues. "Often our industrial applications involve destroying natural systems, and then selling them back, rather than learning about the systems and adapting our practices to them."

The research carried out by Dayanandan, Widden and their graduate students can be labour intensive, involving the collection of materials — from core samples of soil to seeds dispersed across the forest floor. And of course, one must fend off the hostile predators of the Canadian outdoors. "This summer in Abitibi," says Widden, "we were attacked by every type of biting bug — black flies, mosquitoes and horseflies — at the same time. You really don't want to hang around."

Simultaneously, he savours some of the less tangible rewards of his efforts. "Some of the things you find growing on the forest floor are quite incredible," says Widden. "They're beautiful."

Patrick McDonagh, PhD 98, is a Montreal freelance writer.

If you'd like to learn more about Concordia's Department of Biology, visit **artsandscience.concordia.ca/biology**

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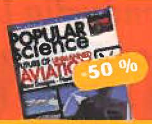

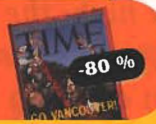

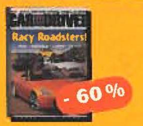

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Harrowsmith Country Life	6 iss.(1 yr)	**$ 13.87**	$ 27.00
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Metropolitan Home	6 iss.(1 yr)	**$ 24.95**	$ 29.94
Organic Gardening	6 iss.(1 yr)	**$ 26.94**	$ 35.94
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Géo Plein Air	7 iss. (1 yr)	**$ 17.50**	$ 29.75
Québec Science	10 iss. (1 yr)	**$ 32.95**	$ 47.50

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Car and Driver	12 iss. (1 yr)	**$ 23.95**	$ 59.88
Cycle Canada	10 iss. (1 yr)	**$ 21.69**	$ 49.50
Cycle World	12 iss. (1 yr)	**$ 29.97**	$ 59.88
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Le Monde de l'Auto	6 iss. (1 yr)	**$ 12.00**	$ 29.70

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Rodale's Scuba Diving	11 iss. (1 yr)	**$ 16.95**	$ 54.89
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Printed 08/03

homecom

The bar was set high: the Concordia University Alumni Association (CUAA) was set to host two dozen events for Homecoming 2003, by far the largest, busiest Concordia alumni reunion event in its history. But would it succeed? Did it ever. From September 30 to October 5, more than 2,700 participants joined in on 23 organized events — the highest attendance ever for Concordia's Homecoming.

TUESDAY, SEPTEMBER 30

Career Networking Night

Andy Nulman, president of Airborne Entertainment and one of the founders of Montreal's Just For Laughs Festival, shared his know-how on the art of networking with 50 alumni and students at the Musée d'art contemporain.

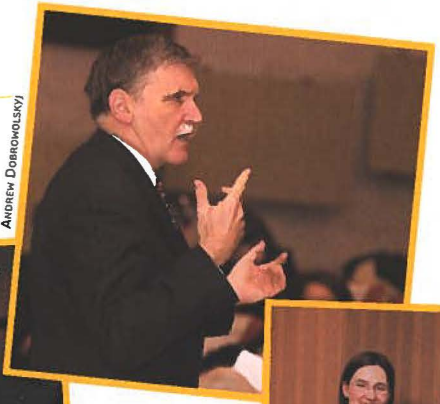
TESL Chapter Seminar and Networking Event

The TESL Alumni Chapter held its second annual seminar and networking event, in the Concordia Hall Building's Faculty Club Lounge. About 90 TESL alumni and friends enjoyed the insights of representatives from the Quebec ministry of education and Concordia's TESL program. Pictured here, **Laura Wong,** BEd 01, **Premalla Pearson,** BEd 89, and **Laura Collins,** PhD 00, enjoy a moment with broadcaster and event emcee **Robert Vairo,** L BA 72, Cert (TESL) 97. ▼

WEDNESDAY, OCTOBER 1

Abitibi-Consolidated Lecture: Lieutenant-General Roméo Dallaire

Retired Lieutenant-General Roméo Dallaire (pictured below) gave an impassioned talk on the role of leadership, peacekeeping and humanity in addressing the unsettling conflicts at the start of the 21st century, at the Abitibi-Consolidated Lecture. More than 600 Concordia alumni, faculty and students, as well as many members of the general public, were in the attendance, including the Hon. Warren Allmand, Rwandan refugee and human rights activist Monique Mujawamariya, and Sasha Trudeau. ▼



Andrew Dobrowolski

THURSDAY, OCTOBER 2

The 13th Annual CUAA Recognition Awards Banquet

At the Delta Centre-Ville Hotel, more than 140 guests joined the CUAA to honour outstanding graduates, professors and friends. The evening was enhanced with the artwork of the 2003 winner of the Guido Molinari Prize in Studio Arts, Melanie Authier.

The award recipients, pictured below: **Seanna Miller,** BComm 03, Outstanding Student Award, VP, Academics and Student Affairs, Commerce and Administration Students' Association, 2002-03; **Nicole Fauré,** BComm 84, Benoit Pelland Distinguished Service Award, past president of the CUAA, 1994-96; **Pierre Sévigny,** Honorary Life Membership, long-time Concordia business administration lecturer and founder of the JMSB's Business Awards of Distinction; **Asim Al-Khalili,** Alumni Award for Excellence in ▼

Harold Rosenberg

ning 2003

-a record year!

Teaching, Concordia Professor of Computer Engineering and a founding member of the computer engineering program; and **Hazel Mah,** BComm 78, MBA 81, Benoit Pelland Distinguished Service Award, member Concordia's Board of Governors, 1997-2002. Not pictured: **Edward Marra,** L BComm 74, MBA 76, MBA Alumni of the Year Award, president and CEO of Nestlé Canada, 2001-2003, and now Executive Vice-President of Strategic Business Units and Marketing of Nestlé S.A. in Switzerland; **Guido Molinari,** Alumni Award for Excellence in Teaching, Concordia painting and drawing teacher 1971-97; **Youri Cormier,** BComm, BA 03, Outstanding Student Award, student representative on University Senate and the Board of Governors, 2002-03.

Journalism Chapter Launch & Networking Night

More than 120 journalism alumni celebrated their chapter launch, hosted by former journalism lecturer Bob McDevitt, at Montreal's chic Club 737. Pictured here: CBC Radio's **Lauren McCallum,** BA 95, and Canada.com's **Cathy Boucek,** BA 93. ▼

FRIDAY, OCTOBER 3

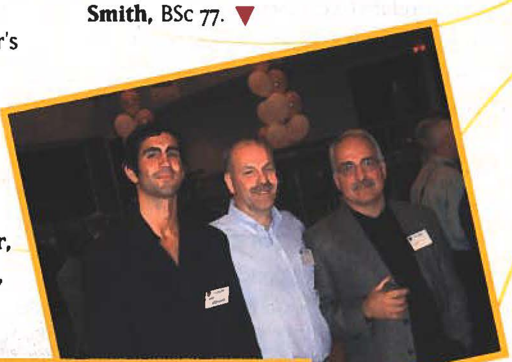
Loyola College Class of '53 50th Anniversary Reunion

The Loyola Class of '53 celebrated their 50th anniversary throughout Homecoming 2003. Twenty-four classmates attended a stag on Friday evening at the Loyola Campus and were presented with an updated version of their yearbook. On Saturday morning the group toured the new Richard J. Renaud Science Complex, followed by the pre-game Backfield BBQ Blitz and Concordia Stingers football game. In the evening, they were among the guests of honour at the Rector's Reunion Dinner. On Sunday morning, Rev. Frank Ramsperger, L BA 53, said mass at the Loyola Chapel. A light breakfast in the Faculty Club brought a close to a delightful reunion weekend. Pictured here, **Hélène and John Major,** L BComm 53, **Nancy and Victor Doray,** L BA 53, toast the Loyola Class of '53. ▼

HAROLD ROSENBERG

Varsity Athlete Chapter Welcome Cocktail

The Varsity Athlete Chapter Welcome Cocktail reunited athletes with their former teammates and coaches and other teams from Loyola, Sir George Williams and Concordia celebrating their championship reunions. Among the 80 guests at Loyola High School for the Varsity Athlete Chapter Welcome Cocktail were student and basketball player **Jon Dresner,** basketball coach **John Dore,** L BSc 75, and **Wally Smith,** BSc 77. ▼

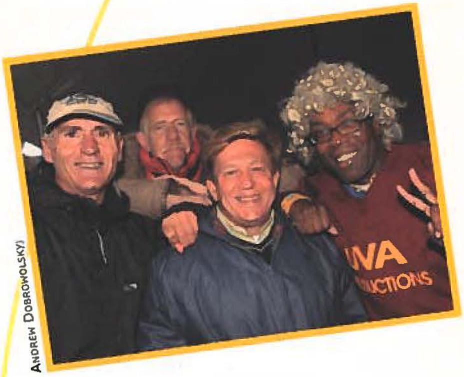


JMSB Chapter Launch and Ultimate Networking Event

Nearly 300 JMSB alumni packed the very hip Café République on Peel St. to take advantage of the outstanding opportunity to network with fellow alumni — and have some fun. ▶

Homecoming Cup Football Game and Backfield BBQ Blitz

Despite the cold and rain, 350 alumni, friends and their families were treated to lunch at the Backfield BBQ Blitz, hosted by the CUAA. Then the boosters cheered the Stingers on to a 38-30 victory over rivals Laval Rouge et Or. Former Loyola Warrior football player Jack McMullan, L BA 53, performed the ceremonial kickoff before 2,100 fans. Pictured here, **David McMillan,** BComm 80, **Michael Hume,** BA 78, **Peter Fogl,** BComm 76, and **Audley Coley** get set to cheer on the Stingers. ▼

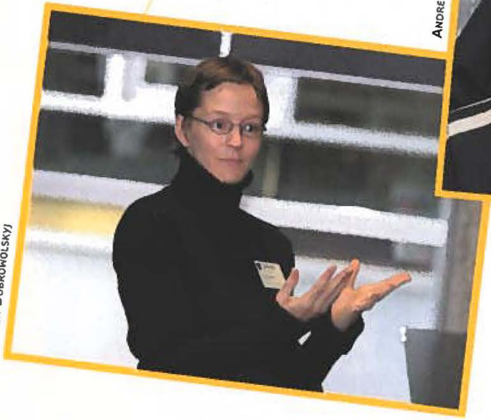


Andrew Dobrowolskyj

SATURDAY, OCTOBER 4

Career-Related Workshops

On a blustery morning, 60 alumni and students enjoyed breakfast and a variety of career-related workshops at the Richard J. Renaud Science Complex. The series appealed to a wide range of alumni: résumé and job searching with Patricia Nolan; marketing skills for entrepreneurs with Peter Palmer; building a business without breaking the bank with Mitch Joel; successful proposals for art projects with **Eva Richardson,** (pictured here); and residencies and the art of marketing art with Scott MacLeod. ▼



Andrew Dobrowolskyj

Richard J. Renaud Science Complex Tours and Pancake Breakfast

More than 240 participants toured the new Science Complex and enjoyed a hearty pancake breakfast. Pictured here, getting in the festive mood: **John Passalacqua,** BA 78, his wife **Madeleine,** and children **Mario** and **Jessica Sarah.** ▼

Andrew Dobrowolskyj

Rector's Reunion Dinner-Dance

The Rector's Reunion Dinner-Dance, held at the Marriott Château Champlain, honoured graduates from Concordia, Loyola and Sir George Williams classes celebrating their 20th, 25th, 30th, 35th, 40th, 45th, 50th, 55th and 60th anniversaries. More than 120 alumni, staff, faculty and friends attended the dinner-dance hosted by Rector Frederick Lowy. Retro band Replay, led by John Oriettas, BFA 81, let alumni, including **Stephen and Lillian Vineberg,** BFA 83 (pictured here), "get their groove on." ▼

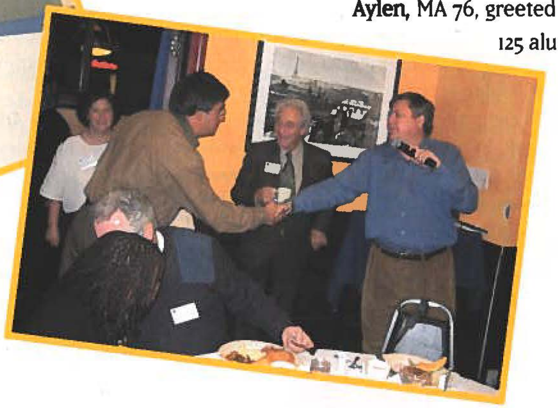
Harold Rosenberg

Homecoming 2003 Arts Festival

The Homecoming Arts Festival, organized by the Fine Arts Alumni Chapter, allowed alumni to display their artwork at the Vanier Library at Loyola and the student-run VAV Gallery, as well as in a travelling exhibition. The Homecoming Film Festival showcased some excellent films from filmmaker alumni. The art-filled week closed with a vernissage of alumni works at the VAV Gallery. Pictured here, **Laurel Smith,** MFA 01, who presented her work, *Untitled, holon.*

Alumni Brunch

Homecoming 2003 ended with a brunch at Jillian's to recognize the CUAA's valuable volunteers. Concordia **Rector Frederick Lowy,** centre, and CUAA president **John Aylen,** MA 76, greeted the 125 alumni.



Homecoming 2004

Concordia turns 30!

September 26 to October 3

Join us as we celebrate this milestone anniversary at Homecoming 2004.

Profit from your connections and use this opportunity to get involved and reconnect with former classmates and friends.

There are many ways to participate:

- Join your alumni chapter or affinity group planning committee.
- Join your reunion class committee.
- Organize a reunion event for your class, department, sports team or student group, etc.
- Sign up to volunteer at a Homecoming event.
- Send us your suggestions for Homecoming events and activities.
- Visit the Homecoming website for the latest news and updates.

I am interested in:

☐ Volunteering (specify): ______________________
____

☐ Attending (specify): ______________________
____

☐ Finding out more about: ______________________
____

Name: ______________________________

Address: ______________________________
____

Telephone: (home)______________(office) ______________

E-mail: ______________________________

Degree, major/specialization and year: ______________

Institution (Concordia, Sir George, Loyola): ______________

Student ID: ______________________________

Please return to: Alumni Relations, Concordia University • 1455 de Maisonneuve Blvd. West, Suite FB-520, Montreal, QC H3G 1M8 • Phone (514) 848-2424 ext. 3885 • Fax (514) 848-2826
E-mail: homecoming@alumni.concordia.ca • Homecoming website: alumni.concordia.ca/homecoming

alumni.concordia.ca

CUAA

Andrew Dobrowolskyj

At Montreal's University Club, September 18, the Concordia University Alumni Association held its annual retreat to introduce volunteers to their executive, each other and the Alumni Relations staff, and to set goals and plan for the year.

At right: the 2003-04 CUAA Board of Directors: front row, **Cristelle Basmaji,** BComm 03, vice-president **Patricia Lavoie,** L communication arts 72, **Cathy Boucek,** BA 93, **Michèle Dumais,** BComm 77, and **Pierre Mongeon,** BSc 78; back row, president of the Association of Alumni of Sir George Williams University **Alexander Farrell,** S BA 63, president of the Loyola Alumni Association **Raymond Huot,** L BSc 68, treasurer **Sean Sprackett,** BComm 92, GrDip 94, corporate secretary **Frank Ciampini,** L BA 72, **Gilles Desautels,** BA 76, and CUAA president **John Aylen,** MA 76. Not pictured: immediate past-president and representative to the Board of Governors Peter McAuslan, S BA 72, Michael Drolet, BComm 93, Lucie Fréchette, BA 96, Mike Owen, BComm 02, and Honor Robertson, BFA 84, GrDip 84, MA 93.

Lebanon

The Lebanon Chapter had a busy summer in 2003: On May 15, Chapter members gathered at the trendy, rooftop Asia Restaurant in downtown Beirut, listening to lounge music and savouring the cuisine. On August 24, the Chapter visited the Ksara wine cellar in the Bekaa (left). The tour of the natural cave featured a professional wine-tasting session, followed by a lunch. For further information about the Chapter, contact Joëlle Jammal, **cuaalebanon@hotmail.com.**

Shuffle

Andrew Dobrowolskyj

There was a great turnout for the 14th annual Shuffle, the walkathon between campuses, September 19. Concordia staff, faculty, students and alumni turned up to run, hike, skate, cycle, walk the dog or push the stroller for the 6.5-km challenge, raising more than $53,000 towards the Shuffle Scholarship Fund.

Journalism

The Journalism Chapter was launched at Homecoming 03 (see page 27), with Montreal *Gazette* city assignment editor Jane Davenport, GrDip 99, as president and CBC reporter Lauren McCallum, BA 95, as vice-president. For more information, visit ***alumni.concordia.ca/cuaa/chapters/journalism***

TESL

After a successful launch at Homecoming 03 (see page 26), the CUAA TESL Chapter is planning its future events. Your comments and support are welcome. For more information, contact Nicole Ngoya, **Nicole.Ngoya@concordia.ca**

Toronto

The CUAA Toronto Chapter Renaissance: On September 23, Toronto-area alumni, led by acting president **Lucie Fréchette,** BA 96, and alumni chapter liaison **Nicole Ngoya,** BA 01, gathered to discuss the rebirth of the Toronto Chapter and to elect a new executive.

What can the Toronto Chapter do for its alumni? Like all CUAA chapters, it will work "to promote the relationship between alumni and the university," and "provide alumni with the opportunity for professional and social interaction, and volunteer opportunities that will benefit both Concordia and the individual." Some of the ideas put forward include: pub nights; culture events; prominent speakers of interest to alumni; a breakfast networking series; the Canadian Open tennis championship; a trip to Montreal for Homecoming 04.

Contact us: So far, the Toronto Chapter has e-mail addresses for 31 per cent of its alumni. Are you a brand new graduate who has just landed in Toronto with baggage in hand? Are you an established grad looking to network or socialize? Whatever your interests, you can be a part of it. Send your e-mail address to **i-love-toronto@concordia.ca**, or visit ***alumni.concordia.ca/cuaa/chapters/toronto*** and get in the loop.

Above, the new Toronto executive: **Wendy Furtenbacher,** BFA 97, membership; **Anthony Iacovino,** BA 78, vice-president; **Lucie Fréchette,** BA 96, president; **Anil Chitnis,** BA 91, communications; **Jenny Lorentowicz,** S BA 71, secretary; **Jeremy Tsai,** BEng 99, treasurer; **Nicole Ngoya,** BA 01, chapter liaison. Not pictured: Toleen Badawi, BComm 00.

Vancouver

On September 14, the Vancouver Chapter held its 2003 golf tournament at Eaglequest's Coyote Creek in Surrey. At right, the 2003 team champions: **Manny Tuvim,** BSc 88, **Murray Anderson,** S BA 60, and **Manchan Sonachansingh,** BComm 79. More alumni joined the golfers afterwards at the Creekside Lounge. For more information about the Chapter, contact Kevin Commerford, **kevinc@heabc.bc.ca.**

Tri-State

The Tri-State Chapter hosted a Newcomers Event at the Penn Club in New York City, September 25. Many of the group of 15 later attended the 11th Annual Canadian University Alumni Event at the Penn Club. This year's guest speaker was Pamela Wallin, Canadian Consul General of New York.

Fine Arts Cabaret

The Fine Arts Chapter will host a multidisciplinary cabaret event during the Art Matters Festival, March 5-19, 2004. Visual art, music, dance, theatre, film, interdisciplinary and any other art is welcome. If you're interested in submitting, performing, curating or simply helping out, contact Elisabeth Hazell, **hazell@canada.com,** or (514) 847-9474.

Alumni Hockey Night: Islanders vs Canadiens

Thursday, February 5, 2004, Bell Centre
Special Concordia alumni price: **$38 all included**
Limited number of tickets available

A great Christmas gift!
To order, contact Sonia Pivetta,
(514) 848-2424 ext. 3876

CONCORDIA UNIVERSITY ALUMNI ASSOCIATION

COMING EVENTS

For updates, visit *alumni.concordia.ca*

MONTREAL

December 13
Holiday Family Skating Party: Join the Varsity Athlete Chapter and Concordia's recreation and athletics department for family skating fun. 2-4 p.m., Ed Meagher Arena, Loyola Campus, 7200 Sherbrooke St. W. **concordia.ca/stingers**

March 5-19, 2004
Art Matters: a student-run fine arts festival showcasing Concordia's creative talent to the city of Montreal. Free. **artmatters.concordia.ca**

OTTAWA

December 5
Ancient Treasures and the Dead Sea Scrolls: Come along for a guided tour of this fascinating exhibition at the Canadian Museum of Civilization, followed by a wine and cheese event. Contact Seymour Dubrow, (819) 994-5735, **dubrows@inac.gc.ca**

CLASS ACTS

Some graduates in this listing have received more than one degree from Concordia, Sir George Williams and/or Loyola. These people are listed under their earliest year of graduation.

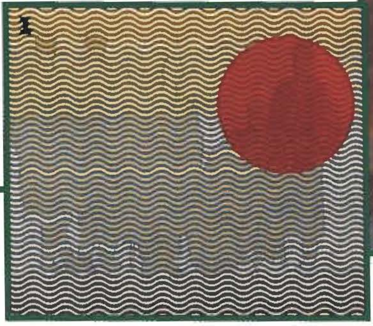
45 **Kathryn (Kay) Curll Staniforth,** S BSc, lives in Nepean, Ont. "I married and left Montreal as soon as I graduated from Sir George in 1945 but I still am grateful for the education I was given and enjoy hearing about activities there."

68 **Robert Butler**, L BA, lives in Ottawa and recently retired after a 33-year high school teaching career. "I would like to touch base with old friends and basketball players." **butler-4@rogers.com**

71 **Theresa Mercurio-Robbins,** L BA (Eng. lit.), writes, "I am married and have been living with my husband in Brampton, Ont., since 1994. I work for the Peel District School Board, teaching English as a second language. We have two children, both in university. I'd love to hear from anyone who graduated around the same year in English or Fine Arts. I miss Montreal's fine restaurants." **mrob36@rogers.com**

72 **Mike Flynn,** L BA (soc.), lives in Manassas, Va. "I worked for the U.S. federal government as an investigator and retired in 2001. I now work part-time in a similar profession. I've been married to my wife, Peggy, for 30 years, and have three children. I'm interested in hearing from any other grads from 1972." **oflynn50@hotmail.com**

73 **Louise Pelly,** S BA (Eng.), received an LLB in 1976 and BCL in 1977 from McGill, and an LLM in 1978 from Harvard Law School. She was accepted to the Barreau du Québec in 1979 and passed the Ontario bar in 1990. "I reverted to my maiden name, Pelly, in 1975, joined Stikeman, Elliott Montreal in 1980, became partner in 1985. From 1988 to 1991 I was Special Counsel for the Department of Finance in Ottawa, and in 1991 I was

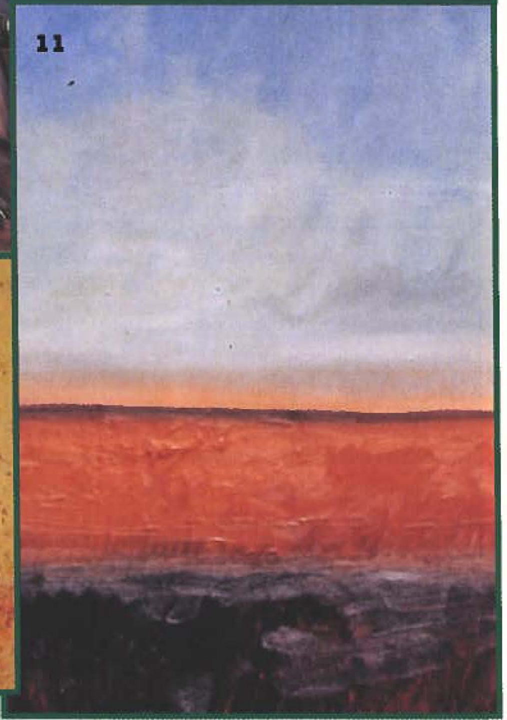


Sarah Valérie Gersovitz, GrDip 78, MA 82, held an exhibition, "Fictions visuelles," at Salle Augustin-Chenier de Ville-Marie in Témiscamingue, Que., June to August. The show was a retrospective of her work from 1960 to 1984. Sarah, a member of the Royal Canadian Academy, has exhibited in more than 300 shows around the world. **1)** *Heir Apparent.*

James Benson, BFA 74, MFA 79, PhD 99, and **Caroline George,** BFA 91, had an exhibition of their work, "the body ~ le corps," at the Uplands Cultural and Heritage Centre in Lennoxville, Que., from September to November. Caroline studied at the École des Beaux Arts de Nîmes in France and has participated in shows in Quebec, Ontario and France. James teaches drawing and sculpture and is the chair of the Fine Arts Department at Bishop's University, and has exhibited in shows in Quebec, the U.S. and Japan. **2)** *Mernina* by James Benson, and **3)** *Supported* by Caroline George.

Louise Dubreuil, BFA 86, had a site-specific installation and performance, "Minding the Gap(s)," at Wilder & Davis Gallery in Montreal, October 10 to December 5. The work adds to elements of "Cent Coeurs," her ongoing visual and performance art series dating back to 1997. **4)** *Water.*

Yvonne Callaway Smith, BA 84, MA 91, EMBA 92, held her fifth solo show, from October to November, at Zéro Celsius Galerie D'art Contemporain in Ste. Adèle, Que. Yvonne is a former Concordia lecturer and moderator and organizer of the Annual Women & Work Symposiums, and began painting six years ago. **5)** *Night Magic.*



Sylvia Safdie, BFA 75, had an exhibition of her work, "Sylvia Safdie: The Inventories of Invention," at Concordia's Leonard & Bina Ellen Art Gallery, September to November. Sylvia has exhibited widely in Canada, the U.S. and Europe. The show brought together recent and new works in various media, including sculpture, installation, video and drawing. **6)** Detail of *Inventory*.

Valerie Kent, S BA 70, had an exhibition of her work, "In The Heart of Nature," presented by the Richmond Hill Chamber of Commerce in Richmond Hill, Ont., from September to October. **7)** *Reach for the Top, Jefferson Forest.*

Sybil Israelian, BFA 83, had an exhibition of her oil paintings, RecAPTURE, at the Galerie de la Ville in Dollard des Ormeaux, September to October. She has exhibited in Montreal, the U.S. and China. **8)** *Desolation*.

Heidi Chapson, BFA 97, had her artwork featured at Salon de Thé O-Cha-I in Montreal, October to November. **9)** *Yellow*

Rosemary-Lucy Cosentino, BFA 98, had an exhibit of her work, "Journeys . . . Capsules de dualité et de temps II," at the Centre communautaire Marcel-Groulx in Verdun, September to October. **10)** *Mapping Journey II*.

Scott MacLeod, BFA 03, was part of a group exhibit at the Montreal Athletic Association, September to October. A former member of the art collective La Raza Group, Scott has exhibited across Canada and around the world. He also has been performing *A Brief Canadian History*, a multimedia music theatre project that revisits seminal moments in Canadian history. **11)** *Taos Sunset*.

appointed Queen's Counsel. In 1994 I moved to Toronto and started my own practice in the regulation of financial institutions. In 1997-98 I was counsel to the Task Force on the Future of the Canadian Financial Services Sector. I'm now a part-time professor at Osgoode Hall Law School, co-author of the Annotated Bank Act and author of *Doing Business in Canada*. I'm a single mother of a teenaged daughter, Alexandra. I'd love to hear from others who graduated in 1973 with a BA in English."
pellyl@pathcom.com

75

Don Morris, BA, was honoured at the 2003 Ontario Federation of School Athletic Associations (OFSAA) Cross Country Skiing Championships with the OFSAA Leadership in School Sport Award for long-term contributions as a teacher/coach. Don has been a teacher for 23 years at St. Mark High School in Manotick, Ont., just south of Ottawa. He has been married for 25 years to Deborah (Roberts), and they have one child, Erin.

Julius Szalipszki, BComm, retired from BCE/Bell Canada Finance in 1986. "My wife Clo and I made the big move to the Comox Valley (Courtenay, B.C.), midway up the coast of Vancouver Island, in March. Wonderful! So many new things to learn and try. We had a drought this summer and expect torrential rains in November-December. Something else to experience — and we didn't bring snow shovels from Montreal!"

76

Jim Corsi, BEng, writes, "I am presently working with the Italian Ice Hockey Federation as they prepare for the Torino Olympics. Go Stingers and Als (even if they do play at that other school's home field)."

Lynda Goldman, BFA, DIA 80, GrDip (TESL) 87, after a successful ESL career, is now a consultant with Goldman Smythe & Associates in Montreal. "I have recently presented seminars on 'First Impressions for Business Success' for the JMSB's Executive MBA Program. I also appeared on Global TV, discussing business casual dress in the workshop, and was on Montreal radio station CJAD discussing dating in the workplace. In June 2003, *Reader's Digest* published my article, 'What Colours to Wear for Business Success.' I have several more articles coming out in *Reader's Digest*. My main focus is on the pharmaceutical industry, where I regularly do seminars with large companies. I am writing a new book, *Prescription for Success: Building Relationships in the Pharmaceutical Industry*."
Lynda@Impressforsuccess.com, ***impressforsuccess.com***

78

Ruben D. Cohen, BEng (mech.), received a master's in mechanical engineering from the University of Massachusetts, Amherst, in 1979, a PhD in mechanical engineering from MIT in 1985, and an MA in economics from McGill in 1997. He is married with three young children, including a new son, born in September. "After a 10-year academic career in mechanical engineering at Rice University in Houston, Tex., I am now working in the financial industry for Citigroup in London, U.K. I was until recently a senior analyst in structured products, and am currently in the audit department. Enjoyable work, except for market upheavals taking their toll every once in a while."

Rafiq Rokerya, BComm (fin. & acct.), received his CGA designation in Ontario in 1984. He now works for Canada Customs and Revenue Agency in Mississauga, Ont. "I was recruited on campus back in 1981 as an auditor, and now manage a team of about 12 auditors. I am also treasurer for several charitable organizations in the Greater Toronto area. I am married and have three daughters."
rafiqrokerya@rogers.com

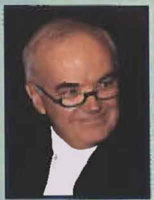
25th Reunion

79

Brian Seaman, BComm, MBA 92, lives in Mississauga, Ont. "I was recently promoted to Senior Supply Manager, Demand Planning, at Kraft Foods in Don Mills. My wife Susan and I have two boys, Andrew and Matthew, who are heavily into hockey and other sports. We own a cottage that we built ourselves in 1997, on Gull Lake in Haliburton, Ont."

KUDOS

David W. Scott, L BA 57, became president of the American College of Trial Lawyers, in Montreal in November. He is the first-ever Canadian to be president of the 5,300-member College. David is a senior partner at the Ottawa office of law firm Borden Ladner Gervais LLP and co-chairperson of the national firm. He received his BCL from the University of Ottawa and is certified by the Law Society of Upper Canada as a Specialist in Civil Litigation. He was appointed Queen's Counsel in 1976. In 2001, David received an Honorary Doctorate of Laws from both the Law Society of Upper Canada and the University of Ottawa.



Allan Hilton, S BA 70, became a judge of the Quebec Court of Appeal in October. He earned his BCL and LLB degrees from McGill and practised with the Montreal law firm then known as McCarthy Tétrault until 1998, when he was appointed a judge of the Quebec Superior Court. He is a Fellow of the American College of Trial Lawyers. At Sir George, Allan was executive vice-president of the SGW Student Association in 1968-69, and he was involved in work that led to the adoption of the Student Code of Conduct in 1969.

Bradley Thomas, BComm 03, was one of the recipients of the Humberto Santos Graduate Awards in Commerce for Concordia's DIA and DSA programs. The award was founded by Quebec-based financial institution the Caisse de dépôt Mouvement Desjardins in memory of the late Humberto Santos, BComm 75, MBA 79.

83

Phil Polster, BComm, received an LLB from the University of Toronto in 1986. He is now a civil litigation lawyer in Toronto. Phil is the author of *Ontario Litigation Procedures*, now in its third edition. He and his wife Lisa have two young children, Lisa and Michelle.

Barbara (Weigl) Westerhorstmann, BA (transl.), lives in Germany. "We moved into our own house in 2001, near Landshut, a town in lower Bavaria, a one-hour drive from Munich. Finally we have a house where each one of our four children has his or her own room, and my husband and I have our own offices! Since November 2002 I've worked for Lydall Industrial Thermal Solutions as office manager of the European office for sales and service of affinity chillers. I love being be back 'in action' after almost 14 years being a mother at home and working freelance. If any of my friends from the years 1980-82 are coming to Germany, I would love to meet you, or if anyone would like to contact me, just write."

bwesterhorstmann@Lydall.com

20th Reunion

84

Janet Mrenica, BA, BComm 92, lives in Ottawa. "I'm Principal Consultant, Corporate Governance, with Consulting and Audit Canada. My latest project was a UN agency program review in Kosovo. I am on the verge of completing my master's in public administration in international

in memoriam

Frank John Starr, L BA 31, died on December 17, 2002, in Clearwater, Fla. Frank was Montreal radio station CJAD's first sportscaster when it went to air in 1946. He later had a long career in advertising. Upon retiring, he became a competitive swimmer. In 1999, at the Master's World Swim Championship in Munich, Germany, Frank broke two world records in his class, and in 2001 became the first Canadian to receive "All American" status from the United States Masters Swimming. He is survived by his wife, Pauline (Miner), and children Peter and Susan. Frank was 92.

B.J. Cleary, L BA 43, died in Ste. Adele, Que., on October 1. He is survived by his wife, Estelle, and children Daniel, L BA 70, Patrick, BComm 77, Michael, BA 75, Estelle and Theresa. He was 82.

Kenneth Dunbar Adams, BSc 47, died on July 30 in Montreal. Ken's connection with Concordia spanned more than half a century. Upon his graduation in 1947 he won the Guinea Pig Award for contribution to student life. He was also a pianist, with a licentiate from McGill, and taught history of music at Sir George from the early 1950s until the 1990s at Concordia. In 1965 he was hired as part-time director of exams at Sir George; he became assistant registrar in 1966, associate registrar in 1968, and registrar in 1969. In 1974 Ken became registrar of Concordia, a position he held until he retired in 1988. Donations may be made in Kenneth Adams's name to the Concordia University Retired Faculty and Staff Scholarship and Awards Endowment. He is survived by his wife, Elizabeth Anne (Curll), S BSc 49, S BA 50, and children Gary, Kathryn-Anne, BComm 87, MBA 89, Fraser, S BA 68, and Heather, BA 90, Cert 95. Ken was 79.

Leonard George Joseph Delicaet, L BSc 52, died February 22 in Toronto. He was former chairman of Woods Gordon and executive partner of Ernst & Young Canada. A native of Cowansville, Que., Leonard studied at Loyola, McGill and Carnegie-Mellon University in Pittsburgh, and was a professional engineer. He was an active volunteer and fundraiser, and was named an Honorary Citizen by Premier Brian Peckford for his work with the Newfoundland forest industry. Leonard is survived by his wife, Anne Margaret, and his children Mary-Kathleen, Kendra Anne and Leonard Jacques. He was 71.

Malcolm "Mac" Thompson, S BA 58, died March 13 in Lindsay, Ont. Originally from Montreal, Mac moved to Lindsay, where he later entered the hospitality industry, first building the Red Carpet Inn and eventually owning 18 Pizza Hut and other franchise outlets. He is survived by his second wife, Judy Matte, and his children, Steve, Beth and Max. Mac was 66.

Bert Young, S BA 69, died in a car crash February 12 in Montreal. Bert was a social activist and taught social sciences at John Abbott College in Ste. Anne de Bellevue for 30 years. Born in Perth, Ont., he moved to Montreal in 1961, then earned his BA in sociology from Sir George and MA in sociology from McMaster University in 1971. He began teaching at John Abbott in 1973, where he was known for his progressive and compassionate teaching and activism. He was also involved with the Association of Canadian Community Colleges. Bert is survived by his wife, Eileen Studd, and sons Ryan and Donovan. He was 62.

Richard "Rick" J. Cormier, L BComm 70, died on September 6 in Calgary. A chartered accountant, Rick relocated to Edmonton in 1974 with accounting firm Clarkson Gordon, became a partner with Ernst & Young in 1981 and was managing partner of the Edmonton office until moving to Calgary this spring. Rick is survived by his wife, Trudy, and his daughters, Jodie and Janie.

Thomas John Spurway, S BComm 72, died on June 30 in Reading, England. Thomas is survived by his wife, Sally (Ellis), and children Jocelyn and Rory.

Gregory Randell Fraser, S BEng 73, died on September 20 in Ottawa. He is survived by his wife, Dianna Kuzyk, and children Pamela and Chris. Greg was 55.

David R. Hargreaves, S MEng 73, died on July 8 in Montreal. A native of Foam Lake, Sask., Dave worked at Concordia's Faculty of Engineering & Computer Science from 1967 to 1995, first as manager of Sir George's Analog & Hybrid Computer Lab and later as engineer/manager of the VLSI Lab. He took early retirement in 1995, and was an active member of the Glenmore Curling Club. Dave was 62.

Elizabeth "Liz" Lasser, BA 76, died on September 5 in Bath, England. A native of Larchmont, N.Y., after Concordia Liz received her MA in international administration and population from the School for International Training in Brattleboro, Vt. She worked for a number of international agencies, including Save the Children in Ethiopia and most recently as program development manager for Futures Group Europe in Bath. She also had a long affiliation with radio and television stations in Canada. Liz is survived by her brother, Robert. She was 49.

Robert Hugh Milliken, BFA 84, died May 13 in Toronto. A native of Regina, Robert lived in Quebec City and Montreal before settling in Toronto after graduating. He was a graphic artist, curator and website designer. Robert was 46.

Irma "Immy" Jaffe, BA 88, died on May 27 in Montreal. Born in Berlin in 1912, Irma and her late husband, Bernard Jaffe, fled Nazi Germany and were among the last Jewish refugees to make it to Canada before the outbreak of the Second World War. She proudly completed her Concordia degree at age 76. Irma is survived by her children Nicole, Conny and Peter. She was 91.

development at Carleton University and am looking forward to the extra time for myself. In the fall of 2000 I became a published author in a team project, *The Non-Profit Sector and Government in a New Century* (McGill-Queen's University Press). For the past two years I have co-moderated the Society of Management Accountants' 'Professional Program' in Ontario, and have been enjoying the challenges and the experience. I remain single. My son, Jean-Sebastien, is turning 18 this year!"

Shammi Sandhu, (BA (econ.), lives in Nepean, Ont. "I am the father of two boys and work for the Solicitor General of Canada in Hull, Que."

86 **Donna Lambertucci,** BA (comm. studs.), lives in Egg Harbor Township, N.J. "After graduating I spent the next six years in the Montreal aerospace industry in marketing and PR. In 1991 I married and moved to Florida, where I spent 11 years in high technology marketing and television production. Last year we relocated to New Jersey, where I oversee direct marketing projects for Showboat and Harrah's Atlantic City casinos. My husband and I have two young children."

Jana Pinka, BSc (chem.), is Director, Analytical R&D, North America, for Firmenich in Plainsboro, N.J. She lives in Princeton. "I am happily married to a fellow Québécois, Jacques Roberge, and we have a young son, Marc. In my spare time I like to run and hang out with the preschool crowd. I would love to hear from any old Concordia friends. Time passes far too quickly. . . ."
jpika@aol.com

87 **Nik Ariff Omar,** BEng (mech.), lives in Kuala Lumpur, Malaysia. "I'm currently running my own business. I'd like to hear from former classmates."
nikariff@epemaju.com

Jeffrey Maddison, MBA, lives in Toronto. "I started my own business, Maddison Consulting Services, one year ago, helping businesses coordinate, write and edit proposals and presentations. I've been married for five years to Juliet Slemming. We have two young daughters, Charlotte and Maxine, who was born in June."

Frank Morris, BA, received a degree in education from the University of Edinburgh and started teaching in the fall in Scotland. He recently retired after a 16-year career in the British Professional Hockey League, where he was captain of the Fife Flyers (Kircaldy, Scotland). Frank was honoured with a testimonial for his long and successful career: he reached 1,000 points in his final year. He and his wife, Jan (Mussen), live in Kircaldy and have two boys, Liam and Connor.

88 **Gary Patrick Vegh,** BSc, GrDip 92, and **Sarah Zahra Sajedi,** BSc 91, moved back to Montreal from Chapel Hill, N.C., in 2002. "We had a second baby, born in Chapel Hill, in 2002. We have also opened a second environmental company in Montreal, ERA Environmental Consulting, Inc., **www.era-environmental.com**."

91 **Sherrie Berdusco,** MBA, is married to Chris Blackwell and they live in Hong Kong. "We have just had baby number three, Alexandra, a sister for big brother Spencer and big sister Darby. I'm putting my MBA skills to task in managing my household (as any stay-at-home mom can attest!). I started my career at Unilever, then worked at Reebok, then Cadbury. I then began my own business, doing strategic planning/brand management for companies such as Labatt, Cadbury and the NFL. My husband was transferred with CIBC to Hong Kong in January 2001, and since then I've been working at home. I hope that my Class of '91 can reschedule our 10th reunion. A warm hello to all my former classmates, with fond memories of our times together."
sherrieb@hotmail.com

Blake Hambleton, BA (poli. sci. & soc.), is an investment advisor with RBC Dominion Securities in Cornwall, Ont. He is married to **Sandra Smith,** BA 93 (psych.), an administrative assistant with RBC Dominion Securities. They have two young children, Trent and Drew, who was born in April.

92 **Yvan Cliche,** MBA, is a commercial delegate for Hydro-Québec International. "In July I completed a three-week study-tour of the United States sponsored by the U.S. State Department on the theme 'America post September 11th.' I met more than 30 leaders from various fields. I'd be interested to share my thoughts with others."
yvancliche@hotmail.com

Bonnie Mitchell, BFA (theatre), writes, "After 10 years at H.S. Billings High School in Chateauguay, Que., seven of which have been spent starting and running an alternative program for at-risk students called Directions, I recently received the Prime Minister's award for teaching excellence. I am completing my master's in educational studies at Concordia."

93 **Julie Fortier,** BFA (design art), teaches at the Convent of Sacred Heart School in Greenwich, Conn. "After the birth of our little girl, I went back to school to complete a post-master's degree in art education. I am now teaching art and computer technology. Vincent and I still live in Tuckahoe, a small town in southern Westchester County, N.Y."

10th Reunion

94 **Ron Bianchi,** BA (econ.), writes, "I continued my studies at the University of Toronto, where I received an MA in economics in 1996. After eight years in Toronto, I returned to Montreal to become an economics professor at Vanier College.

Dave Nanderam, MA (soc.), writes, "I recently left the corporate/human resource consulting world to pursue another passion. I am the founder/president of Tapestry-Builder, a not-for-profit company that is building a communications infrastructure to connect all Caribbean cultural associations in southwestern Ontario." **dnanderam@cogeco.ca**

Mary Sarli, BA (math & bus.) and **Mario Giulione,** BA (Eng.) 91, were married in July. "We spent our honeymoon in Thailand. I work as a commercial sales assistant for an export company selling flax/linen to the textile and automotive industry in North and South America. Mario is an ESL teacher at a French high school in Longueuil. He was recently commissioned to write an English grammar exercise book for the Marie-Victorin school board. We live in Greenfield Park."

96

Natalie Andres, BSc (exer. sci.), lives in Vancouver. "I recently accepted a position with Best Buy Canada (which acquired Future Shop in late 2001) as the new manager of retail strategies for both the Future Shop and Best Buy brands. I am responsible for developing strategies and processes surrounding merchandising projects and space planning, managing the work plan and timelines of projects and developing the sustainable processes necessary for their successful implementation in stores nationally."

Vissarion (Vince) Messinis, BComm (intl. bus.), received an MBA in 2001 and is now a marketing manager for Preveza Spinning Mills S.A., Stelios Argyros, in Athens, Greece. **vincemessinis@hotmail.com**

Paul J. Mirshak, BComm, writes, "I recently completed my MBA in Sports Business from the W. P. Carey School of Business of Arizona State University in Tempe. I am pursuing my passion, hockey, and have accepted a position as the new sales and marketing manager for the Central Hockey League, headquartered in Phoenix. I'd like to hear from any of my old classmates, especially from the Commerce Games and U.B.G. 1996 championship teams." **paulwpcmba@yahoo.com**

97

Milan Miletic, BA (comm. studs.), is a Montreal filmmaker and author. This fall, his documentary film *Mediatrap* was shown at the Festival international du film francophone de Namur, Belgium, in the category Films Documentaires, Hors Compétition.

5th Reunion

99

Shahid Ahmad, BComm (fin.), lives in Brampton, Ont. "After graduating, I moved to Toronto for work. Life here is very fast-paced, and I miss the lifestyle of Montreal. At the moment I am working for Hospitals of Ontario Pension Plan as a pension controller. I am proud to be a graduate of Concordia's business program."

Alma Mebar, BA (Spanish), is marketing communications coordinator for Grand Hyatt Dubai in the UAE. "I joined the pre-opening team of Grand Hyatt Dubai in October 2002. I do promotion and am learning marketing for the hotel. I'm also learning about marketing, producing collateral and establishing an ad campaign. The hotel opened in March, and my work has changed to cater to the daily operations. I really enjoy what I do and plan to stay with Hyatt International for a long time." **almamebar@hotmail.com**

02

Chrysovalantis Kastanas, BComm, lives in Montreal. "I began studies in September 2003 for my CGA. I work for Hotel Europa as an accounting clerk, preparing financial reports and handling accounts receivable. I would be glad to hear from classmates." **ckas@total.net**

Emily Wickwire Foster, MA (art therapy), lives in Halifax. She received a BA from the University of King's College in 1991, a BEd from Dalhousie in 1993 and a BFA from Nova Scotia College of Art and Design in 1999. "After Concordia, I returned to Nova Scotia, in 2002. I co-chaired the provincial arts educators' conference, and co-curated 'Visual Arts Matters,' a provincial call for submissions exhibited at the Anna Leonowens Gallery. I received the Canadian Certified Counsellor status through the Canadian Counselling Association in March 2003. I also presented 'Art as a Healing Tool' for the Canadian Ovarian Cancer Society national symposium series in Halifax in June 2003. Recently, I held a public open house for what is the first art therapy office/studio in Halifax, and I'm now in private practice."

Rob Vroom, BA (comm. studs.), was the director of photography and co-producer for the film *One Hot Rotting Zombie Love Song*, directed by Concordia film production student Christophe Davidson. The spoof on the zombie film genre won the award for Best Fiction in the Student Film category at the 2003 Montreal International Film Festival.

03

Seanna Miller, BComm, who was VP Academics & Student Affairs for CASA, is now an associate analyst in information management at McNeil Consumer Healthcare, a member of the family of Johnson & Johnson companies, based in Guelph, Ont. Seanna was a recipient of a CUAA 2003 Outstanding Student Award (see page 26).

Paul Sial, BComm (fin.), lives in Brossard, Que. "I've started my own business as a financial planner, giving advice on asset management, tax planning or just guidance on making money." **bunty_jones@hotmail.com**

Homecoming 2003

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He's at it again. Award-winning investigative reporter **Max Wallace**, BA 90, offers another provocative, controversial, no-punches-pulled book: ***The American Axis: Ford, Lindbergh and the Rise of the Third Reich*** (St. Martin's Press, $41.95). Through careful and thorough research of newly accessible archives, military files and previously classified documents, Wallace paints a damning and shocking picture of two American icons of the first half of the 20th century, Henry Ford and Charles Lindbergh, revealing them as dangerous anti-Semites and ardent supporters of Hitler's Germany. Wallace's previous books include *Who Killed Kurt Cobain?* and *Muhammad Ali's Greatest Fight: Cassius Clay vs. the United States of America*. A New York native, Wallace lives in Montreal.

In ***Egypt, Trunk of the Tree: A Modern Survey Of An Ancient Land, Vol. I*** (Algora, $39.95), **Simson Najovits**, S BA 59, an award-winning journalist, takes readers through an insightful tour of early Egypt, exploring the realities and myths of the ancient civilization. Volume I surveys the religious underpinnings of the society, while Volume II, to be released shortly, discusses Egypt's place in the history of religions and monotheism. Najovits is a former editor-in-chief at Radio France International in Paris and a winner of Canada Council for the Arts and Quebec Arts Council awards. This is his first American-published book. He lives in Paris.

The New Millennium Series, originated in Iceland in 1998, is a global publishing endeavour that promotes peace by showcasing U.N. member states. ***Canada — The New Millennium Series*** (Carol Canada Publications, $59.95) is the Canadian inclusion and the seventh in the series, edited by **Elizabeth Moody-McIninch**, L BA 67, S MA 68, and photo edited by the late, renowned landscape photographer Malak Karsh. The stunning, large-format (a.k.a. coffee-table) book features 26 guest columnists, including cabinet minister Allan Rock, astronaut Roberta Bondar and Quebec lieutenant governor Lise Thibault, writing on subjects ranging from Canadian history, art and literature to the economy and industry. Moody-McIninch has taught history and international relations, and is an archivist, political speechwriter and policy analyst. She lives in Montreal.

Les Sabler, BFA 78, like so many other young guitarists, started his musical route playing rock 'n' roll. He then moved to blues before finding his musical niche playing jazz guitar. Today, Sabler has earned comparisons to John Scofield, George Benson and Jeff Beck. His recently released third CD, *Bridge the Gap* (The Music Force Media Group, $18.99), hit #2 on the ***smoothjazzcanada.com*** charts. The Montreal native studied jazz at Concordia before moving to Florida, where he now resides, to study at the University of Miami's jazz department. The South Florida Latin and R&B sounds still influence his music. Visit ***lessabler.com.***

What's got feathers, a beak, four legs and barks? It's Passepoil, the creative dog at the heart of ***Le grand rêve de Passepoil*** (Dominique et Compagnie, $18.95), by **Elaine Arsenault**, BA 83, illustrated by Christiane Duchesne. In this delightful children's story, Passepoil, a pet-store puppy, tries to woo the seamstress working next door into buying him by dressing up as a cat, a fish and a bird. This is the first book for Arsenault, who by day is Concordia's assistant director of alumni relations. The book's English release, as *Buttons*, is set for next spring, and Arsenault has already finished and interested the publisher with four more books in the series.

— Howard Bokser

How modern are we?

BY SIMA APRAHAMIAN

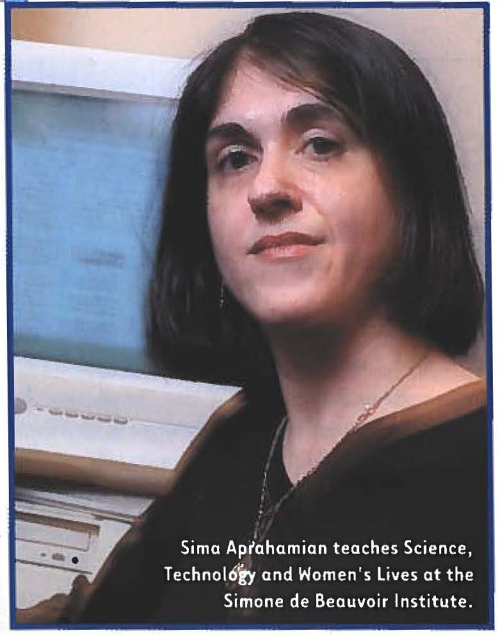
"We have never been modern," argues French thinker Bruno Latour in his groundbreaking essay of the same title from 1991, as science entered a new technological age. Instead, Latour writes, modernity from the 17th century on has been a process aimed at purifying and classifying everything — setting apart nature from culture and humans from non-humans, even knowing that the human body is part of the animal world.

Science is as old as humankind, but the separation of science and culture, privileging science as a special form of knowledge that is given special status in our society, is a recent phenomenon. Over the past century, we have put science and technology on a high pedestal. This is plain in the politics surrounding the distribution of funds and resources, in the wage/salary system, in academic circles and in everyday life.

SCIENCE AND TECHNOLOGY are SUPPOSEDLY "UNBIASED," BUT are ACTUALLY INFUSED WITH CHANGING NOTIONS and CULTURAL ASSUMPTIONS.

Let's take the example of our own university, where general education gradually gave way to distinctions between the hard-core "pure" and natural sciences and social/human sciences. Its science programs cost more, come with expensive labs and often fewer students per teacher compared to the social/human sciences. This development has taken place in modern history, where the hard-core sciences have been valued for their "applied" potential and showcased for this importance. (Regrettably, many governments around the world are inclined to fund research programs that show prospective military applications.)

In our time, we have been trained to consider socio-cultural issues as being separate from scientific inquiries. We tend to forget that beliefs, attitudes and notions that have become common reality for us do affect science. Examples include Nazi medical science in the belief of a superior Aryan race or the nuclear arms race during the Cold War; and in our time, biotechnology that is perhaps ultimately driven not so much by the quest for immortality or altruistic aims to feed the world as by pure profit.


Sima Aprahamian teaches Science, Technology and Women's Lives at the Simone de Beauvoir Institute.

ANDREW DOBROWOLSKYJ

Relatively new fields of study, such as cultural studies of science and technology, feminist science and technology studies (including the Simone de Beauvoir Institute's course Science, Technology and Women's Lives), have shown that science and technology are cultural systems. We no longer study science as an autonomous body of knowledge but as a context-dependent one. Indeed, scientific "discoveries" of "natural truths" are influenced by political, social and economic factors, and "chance" plays a role as well.

Science is a socio-cultural system and a historical phenomenon — as well as a site of power. Science and technology are supposedly "unbiased," but are actually infused with changing notions and cultural assumptions. As a system of inquiry, science is supposed to be open to questioning, yet it has been put on a par with unquestionable sacred religions. We ignore the relations of domination that are embedded in science and technology. As Emily Martin puts it in *The Woman in the Body*, "Our focus on technology, its ever-changing needs and demands, diverts our attention from the social relationships of power and domination that are involved whenever humans use machines to produce goods in society."

We could attribute gender and racial divides to modernity as well. Looking back to the 17th century, we find Francis Bacon, who believed that empirical and scientific methods would lead to understanding of the natural world, Auguste Compte and his value-free model of science, and René Descartes, who to this day influences thinking that the natural world can be scientifically deduced, explained and classified.

But as Latour rightly argues, in our modern quest in search of "purity," we often forget that our world is full of hybrids — in a mysteriously "impure" nature.

How modern are we? The answer might be found where science meets culture.

Sima Aprahamian is an adjunct fellow and lecturer in Concordia's Department of Sociology and Anthropology and Simone de Beauvoir Institute.

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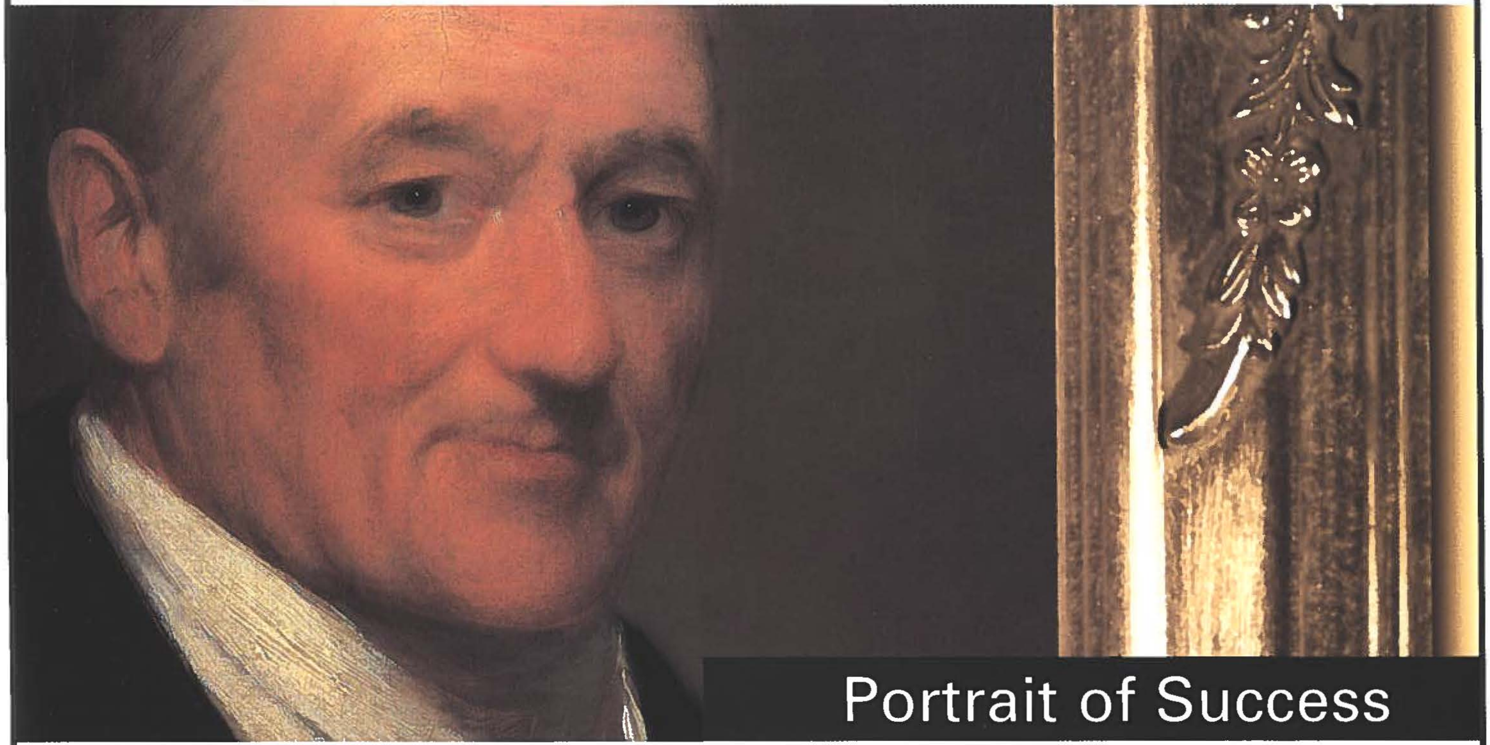

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** Statistics Canada, Death 1998 – Report 84F0211XPB.

*** Investor Economics – The Household Balance Sheet Report – 2001 Edition.